United States Court of Appeals

for the

District of Columbia Circuit

TRANSCRIPT OF RECORD

JOINT APPENDIX TO BRIEF FOR APPELLANT

United States Court of Appeals

For The District of Columbia

United States Court of Appeals
For the
District of Columbia Circuit

No. 13,050

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385

AUBREY L. JONES,
Appellant,

vs.

ROBERT C. WATSON,
Commissioner of Patents,
Appellee.

Appeal from Final Judgment of The United States District Court for The District of Columbia

J. WARREN KINNEY, JR.,
506 First National Bank Bldg.,
Cincinnati 2, Ohio.
Attorney for Appellant.

JAMES W. DENT,
500 American Building,
Washington 4, D.C.
OF COUNSEL.

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UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF COLUMBIA CIRCUIT

AUBREY L. JONES,
Stewardson,
Shelby County, Illinois,
Plaintiff,
vs.
ROBERT C. WATSON,
Commissioner of Patents,
Washington, D. C.,
Defendant.

CIVIL ACTION NO. 1304-53

COMPLAINT

Aubrey L. Jones, plaintiff herein, brings this complaint against Robert C. Watson, Commissioner of Patents, defendant, and alleges that:

1. The plaintiff herein, Aubrey L. Jones, is a resident of Stewardson, in the County of Shelby, in the State of Illinois.

2. The defendant, Robert C. Watson, is the United States Commissioner of Patents, and is officially a resident of Washington, in the District of Columbia, within the jurisdiction of this Court.

3. This action is brought under the provisions of Title 35, Section 145, United States Code.

4. On or about the 21st day of May, 1949, Aubrey L. Jones, applicant herein, executed an application for Letters Patent for Apparatus for Distributing Pulverulent Material invented by him.

(110) 5. On or about the 24th day of May, 1945, the said applicant duly made application in writing in the United States Patent Office for the grant of Letters Patent to him for the Apparatus for Distributing Pulverulent Material, which application was given Serial Number 95,114.

6. Said application for Letters Patent contains the claims to which plaintiff believes himself entitled, said claims being numbered 1, 2, 3, 4, 5, 6, 16, 29, 30 and 31.

7. Thereafter, said application for Letters Patent was examined by the Examiner in charge thereof who, on the 10th day of July, 1951, finally rejected the claims herein above set forth; on the 17th day of August, 1951, an appeal was taken to the Board of Appeals of the United States Patent Office and on the 30th day of January, 1953, said Board of Appeals rendered its decision, affirming the rejection of the claims by the Examiner.

8. Plaintiff alleges that the decision of the Board of Appeals adjudging the plaintiff not entitled to Letters Patent for the Apparatus for Distributing Pulverulent Material, recited in said claims numbered 1, 2, 3, 4, 5, 6, 16, 29, 30 and 31, was erroneous and contrary to law.

9. Plaintiff further alleges that no appeal has been taken by him to the United States Court of Custom and Patent Appeals from said refusal of the Commissioner of Patents to issue said Letters Patent, and that the complaint herein is filed within sixty days following the final decision of the Board of Appeals refusing to allow the aforesaid claims and issue Letters Patent on said Apparatus for Distributing Pulverulent Material.

(111) 10. Plaintiff makes proffert of a certified copy of the aforesaid application for Letters Patent, Serial Number 95,114, and all proceedings and papers in the file thereof, together with certified copies of patents form-

ing the basis for the aforesaid decision refusing to allow the claims and issue Letters Patent on said invention, said certified copies to be produced as and when this Honorable Court shall direct.

WHEREFORE, plaintiff respeotfully prays as follows:

A. For a decree that plaintiff is entitled to receive Letters Patent for the Apparatus for Distributing Pulverulent Material, shown and described in the aforesaid application, Serial Number 95,114, in due form of law as prescribed by the Statutes.

B. For a decree pursuant to United States Code Title 35, Section 145, authorizing the Commissioner of Patents to issue Letters Patent on said Apparatus for Distributing Pulverulent Material, in due form of law and as prescribed by the Statutes.

C. That plaintiff have such other and further relief as the nature of the case may admit or require and as may be just and equitable.

Respectfully,
/s/ J. WARREN KINNEY, JR.
Attorney for Plaintiff
506 First National Bank Building
Fourth & Walnut Sts.
Cincinnati 2, Ohio
JAMES W. DENT
Attorney for Plaintiff
1317 F. Street, N.W.,
Washington 4, D. C.

(112)

E. L. REYNOLDS, Solicitor,
United States Patent Office,
Washington 25, D. C.
Attorney for Defendant.

ANSWER TO THE COMPLAINT

To the Honorable the Judges of the United States District
Court for the District of Columbia.

1, 2, 3, 4, 5, 6, 7. The defandant admits the allegations of paragraphs 1 to 7, inclusive, of the complaint.

8. He denies the allegations of paragraph 8.

9, 10. He admits the allegations of paragraphs 9 and 10.

FURTHER ANSWERING, the defendant states that the plaintiff is not entitled to a patent containing any (113) of the claims set forth in the complaint for the reasons given and in view of the references cited in the Examiner's statement and in the decision of the Board of Appeals in the plaintiff's application. Profert of copies of the said statement, decision, and references is hereby made.

Respectfully submitted,
E. L. REYNOLDS
Solicitor, U. S. Patent Office,
Attorney for Defendant.

April 7, 1953

I hereby certify that a copy of the foregoing ANSWER TO THE COMPLAINT was mailed today to the attorney for the plaintiff, Mr. James W. Dent, 1317 F Street N. W., Washington 4, D. C.

E. L. REYNOLDS
Solicitor.

* * *

DEPOSITIONS TAKEN IN OTTAWA, ILLINOIS

(115) **Glenn A. Duis,**

called as a witness on behalf of the plaintiff, having been first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Kinney:

Q1 Will you please state your name, address and occupation.

A Glenn A. Duis, 207 River Avenue, Streator, Illinois; president, Anthony Company.

Q2 What is the business of the Anthony Company?

A Build automotive equipment consisting of dump bodies, hydraulic hoists and lift gates.

Q3 Has the Anthony Company ever manufactured spreader (116) equipment?

A Yes, they have.

Q4 What type of spreader equipment?

A A hopper type body with spinner distributing means.

Q5 What name is usually applied to such type of spreaders, as a general class?

A Ours was a hopper type material spreader.

Q6 What types of material were they adapted to spread?

A The spreader, as we build it, was adapted to spread limestone, sand, cinders and various fertilisers. The spreader was not satisfactory for a finely ground material such as super phosphate and finely ground lime.

Q7 Are such spreaders known in the art as "limestone" spreaders?

A That is true.

Q8 Would that be a general or generic term applied to this type of spreader?

A We originally called it a limestone spreader and the name "material" spreader was used when we went into road sanding and uses broader than the fertiliser field.

Q9 Will you briefly explain what is meant by super phosphate.

A Super phosphate is a finely ground material which is readily available to the soil.

(117) Q10 How does super phosphate differ from phosphate?

A Super phosphate has been aged by acid treatment which breaks down the structure and makes it more rapidly available to the soil.

Q11 Had super phosphates ever been spread by your limestone or material spreaders?

A They have been spread, yes.

Q12 Will you briefly explain what occurs when a limestone or material spreader is used to spread super phosphate?

A Due to the very fine grind of the material it stays in suspension in the air and the loss of the material out of the desired pattern can be very great.

Q13 Could you indicate generally the area or extent of the pattern which would result when a regular limestone spreader is used to spread super phosphate?

A The definite pattern is not too big due to the fact the material is so light. It is hard to establish a very definite pattern with the extremely light material.

Q14 Are you familiar with Aubrey — or rather, do you know Aubrey Jones of Shelbyville, Illinois?

A Yes.

Q15 Will you briefly state what relations you have had with Aubrey Jones?

A Aubrey Jones bought some of our material spreading
(118) bodies and developed the Jones attachment as an

accessory or an addition to our body. He called it to our attention and we felt that it was a needed item in addition.

Q16 Will you state how the Jones spreader attachment cooperated with the limestone spreader of your manufacture to facilitate the spreading of super phosphate?

A Please repeat that.

(Thereupon the question was read)

The Jones attachment established a very definite pattern of distribution when used with our material spreader.

MR. KINNEY: Would you mark this Plaintiff's Exhibit A.

(Thereupon said exhibit was so marked)

Q17 I hand you what has been marked Plaintiff's Exhibit A and ask you to state what it is.

A That is the Jones attachment that the Anthony Company produced and used.

Q18 With reference to Plaintiff's Exhibit A and directing your attention to the small photograph which I shall now indicate by the Arrow "R". Will you indicate the relationship of the Jones attachment to the spreader as it appears in that particular photograph.

A In this photograph the spreader is in the folded (119) or carrying position which is placed in that position to either carry down the highway or to use the spreader in its normal fashion for coarse material — sand, cinders or so forth.

Q19 Mr. Duis, in that answer when you say the spreader are you referring to the limestone spreader that you manufacture or by the term spreader — or what did you mean there?

A I meant the Jones device is folded in the carrying position or in the position that it is carried when our Anthony material spreader is used on work that doesn't require the concentrated pattern.

Q20 When the Jones attachment is in the folded position illustrated in the photograph "R" of Plaintiff's Exhibit A, does it in any way affect the spreading or distributing characteristics of your spreader?

A No, it doesn't.

Q21 Will you briefly state the results, referring to any other photographs of Plaintiff's Exhibit A, as to what occurs when the Jones attachment is utilized with a conventional limestone spreader for distributing phosphate or super phosphate?

A The Jones device would function with competitive material spreaders as well as with the Anthony material spreader. The function is to establish a definite (120) pattern with the finely ground materials.

Q22 In this definite pattern can you state the uniformity of pattern throughout the width of the attachment?

A I am not familiar with details of what the variation was. In general, as our literature states, it gave a uniform pattern.

Q23 Do you know, of your own knowledge, whether the small photograph indicated by the headed arrow "S" of Plaintiff's Exhibit A accurately portrays the results obtainable when a Jones attachment is utilized in conjunction with an Anthony limestone spreader?

A Yes. I have seen that pattern established in the field.

* * *

(121) Q25 I hand you what has been identified as Plaintiff's Exhibit B and ask you to state what it is.

A That is a British patent to Hubert Cecil Johnson.

Q26 Mr. Duis, have you studied and are you familiar with the disclosures of the British Johnson patent, Plaintiff's Exhibit B?

A Yes, I have examined the patent.

Q27 Will you state the manner of operation, the mode of operation of the device described in the Johnson patent?

A The Johnson device uses a definite air stream created by a paddle wheel type of fan to blow the material out through the housing and onto the ground.

Q28 Are there any other means provided for distributing the material other than I believe you said an air stream?

A There is some throwing action from the type of fan used. That is, the material will hit the blades and be thrown as well as blown.

(122) The necessity for the air, however, is made necessary due to the light type of material that is involved in super phosphate and its inability to travel any distance without the help of air, so air is used to convey this material to the extremity of the housing and on out of the housing onto the ground.

Q29 What is the purpose of the shrouds indicated in Fig. 5 of the drawings of Plaintiff's Exhibit B?

A They serve as a guide for the air stream.

Q30 Will you elaborate on what you mean by a guide for an air stream.

A Well, without the guide for the air stream, the material, due to the injection of air into its conveying theory would billow out in a cloud and would not be directed to the ground. It would be directed in an outward direction.

Q31 In what manner is the material discharged from shroud 48 of the British Johnson patent?

A Well, the air stream blows it to the ground.

Q32 I hand you a blank sheet of paper and pencil and ask you to make a sketch, if you will, illustrating your last answer.

(Witness makes sketch)

MR. KINNEY: Will you identify this, please, as Plaintiff's Exhibit C.

(123) (Thereupon said exhibit was so marked)

Will you now, referring to Plaintiff's Exhibit C add numerals, starting with 100, as you explain in words Plaintiff's Exhibit C.

A I —

Q33 By that I mean if this should represent a shroud, if you will say 500 represents a shroud, and in that manner, so we can tie what you are going to say into your sketch.

A Yes. Paddle wheel, say, 100 is used to create a fanning action and pick up and throw the material to be spread. Indicated air stream 101 travels through shroud 102 and hence, down to the ground level, 103. This air has been induced into the fan through holes 104 which completes the circuit of air travel in this device.

Is that complete enough?

Q34 Would you now draw a further sketch illustrating your understanding of what occurs through a section indicated by the line "x-x" of Plaintiff's Exhibit C?

MR. MOORE: Which you have added to the sketch.

MR. KINNEY: Which I have just added to the sketch, yes.

A Well, in tracing the air through the section (124) x-x we find a flow in an outwardly direction through the tube and also a downward flow.

I think that may answer the question.

Q35 Is that the same condition which occurs in the outer end portions of the Jones attachment?

A No, it is not.

Q36 Will you indicate in what manner it differs.?

A The Jones attachment operates on an entirely different theory, being a self-contained air circuit without the induction of outside air into the unit.

Q37 Will you make a third sketch on Plaintiff's Exhibit C indicating graphically what you meant by that last answer.

(Witness makes sketch)

Now, using numerals, starting with 200 will you briefly explain this sketch you just made, identifying the parts.

A Rotating spinner No. 200 picks up the material to be spread and in a combination with throwing and air generated by its rotation carries the material in a circuit, shown by arrows 201. The self-contained nature of this air circuit causes the chamber to become so saturated with the material to be spread that it settles out of the circuit and settles to the ground. There is no induced air in the direction of arrow 202. (125) This is the basic difference in the two devices. One actually brings in outside air.

Q38 Will you identify — you say one now.

A The Johnson device brings in outside air, which carries the material to the ground on air current.

The Jones device uses the air stream to carry the material around through the enclosure until the saturation is such that it falls to the ground with no definite air pattern to drive it to the ground.

Q39 Mr. Duis, when did you first have knowledge of the Johnson patent, Plaintiff's Exhibit B?

A I don't recollect the exact date. I think it was around forty — Is it permissible to refresh my memory from papers I have?

Q40 If it is so stated, that you are refreshing your memory from your own papers, I would say it would be permissible.

A Is that permissible?

(Witness referring to document)

I would say around 1949.

Q41 Do you recall what the circumstances were at the time you learned of the Johnson patent?

A The Anthony Company was interested in an attachment of this nature and we reviewed this patent in the normal course of investigating the devices that (126) were available.

Q42 Do you recall whether that was before or after your dealings with Aubrey Jones?

A I would say it was after our dealings with Aubrey Jones.

Q43 Referring to Plaintiff's Exhibit A will you state under what circumstances the Anthony Company was utilizing the Jones attachment.

A The Anthony Company entered into an agreement with Jones to pay him a pre-patent royalty after a view of his device and it was under that pre-patent royalty that we built and sold the Jones spreader.

Q44 Are you still building and selling the Jones spreader?

A No, we are not.

Q45 Why not?

A Because we discontinued our entire line of material spreading bodies.

Q46 About when did you discontinue that line?

A March 4 of 1952 was the final payment to Jones.

Q47 Mr. Duis, do you have any interest in the outcome of this proceeding entitled Aubrey Jones vs. The Commissioner of Patents?

A No.

Q48 Does the Anthony Company have any interest in (127) the outcome of this case?

A No.

Q49 Are you being paid or in any other way reimbursed for your time you are spending in reviewing this case and testifying here today?

A No.

Q50 Do you expect reimbursement —

A No.

Q51 —or any other type of remuneration for your services?

A No.

MR. KINNEY: Mark this Plaintiff's Exhibit D.

(Thereupon said exhibit was so marked)

Q52 I hand you what has been identified as Plaintiff's Exhibit D and ask you to state what it is.

A It is letters patent to Christian U. Stoltzfus.

Q53 Have you studied and are you familiar with the details of the device disclosed in the said Stoltzfus patent?

A Yes, I am.

Q54 Will you state your understandings of the disclosure of the Stoltzfus patent.

A During our investigation we studied the Stoltzfus theory and felt as he stated that it was simply a wind breaking cushion-or curtain, pardon me. It did (128) not establish a definite pattern to be saturated with the theory of the Jones device, and we discarded it as not doing the job we wanted done.

Q55 Were you aware of the said Stoltzfus patent at the time you entered into your agreement with Aubrey Jones?

A Yes, 1949.

Q46 Directing your attention to Figure 2 —

MR. KINNEY: Mr. Moore, do you have a copy of the Stoltzfus patent there?

MR. MOORE: Yes.

MR. KINNEY: Q57 —Fig.2 of the Stoltzfus patent —

A Yes.

Q58 And in particular to the location of impellers 12.

A Yes.

Q59 Will you state what differences — Will you compare the location of the Stoltzfus impellers 12 with the location of the impellers of Anthony limestone spreader.

A The Anthony spreader impellers were much closer together than the Stoltzfus device.

Q60 In the Anthony device would the spreaders be within the confines of the truck body projected?

A Yes.

(129) Q61 Does Stoltzfus attribute any reason for locating his impellers 12 where he does?

A I don't recall any definite reason other than widening the normal pattern to cover more ground.

Q62 I now direct your attention to Page 1 of the specifications of the Stoltzfus patent, Column 2, Lines 17 through 21 and ask you to first read that sentence into the record and then to state your understanding of that sentence.

A "The purpose of the curtains is to protect the distribution of the material from the discs from air currents or wind so that the uniform distribution of the material will not be affected on a windy day."

Was that the portion?

Q63 Yes. Read the question.

(Thereupon the question was read)

A This states that the purpose of the curtain is to protect the material from the wind and not in any way does it mention the creation of pattern such as we have in the Jones device.

Q64 Directing your attention now to Page 1, Column 2 of the Stoltzfus patent, will you read into the record the single sentence starting Line 9 and ending Line 13.

A That is Page 1?

(130) Q65 Yes, Page 1.

A Yes. "The discs 12 have secured on the upper faces thereof radially extending fins or plates 19 to aid in the discharge of the material received from the troughs 11 over a given area of ground as the vehicle progresses thereover."

Q66 Will you now state what the expression "over a given area of ground" refers to.

A That refers to the normal pattern that is developed by the material falling on these rotating discs.

Q67 Is that the pattern referred to in Lines 17 through 21 which the curtain houses?

A I would say that it does. It states that the curtains are to protect the distribution from the air currents and the distribution is the result of the pattern established by the rotating spinners.

* * *

(131) Q72 I hand you Plaintiff's Exhibit E for identification and ask you to state what that is.

A That is letters patent of George O. Hoffstetter.

Q73 Are you familiar with the device illustrated in that patent?

A Yes.

Q74 Will you explain briefly the manner in which it operates.

A The material to be spread is forced along a tubular structure with a series of incline paddle wheels which, in effect, form a screw conveyor for moving the material to the far end of the structure. Holes are placed in the bottom of the structure. A portion of this material falls through the holes as it is moved (132) along by the screw conveyor. There is no air principle involved in this device, and there are a number of disadvantages in this type of construction.

Q75 Would you please state some of those disadvantages.

A The cost of the mechanical means by which it operates is expensive. The possibility of foreign material getting into the material to be spread and plugging up the small openings is very probable and the pattern may not be as uniform as desired, due to getting the proper flow of material to completely fill the tube which does the spreading.

Q76 With reference to an Anthony limestone spreader provided with a Jones attachment such as illustrated in Plaintiff's Exhibit A, will you state what would occur were one of the side or one of the hinged end members raised during operation of the spreading mechanism of the limestone spreader?

A In the Anthony or in the Johnson?

Q77 In the Anthony.

A In the Anthony. Well, if the — On what type of material?

Q78 On phosphates.

A You would get a cloud of material that would follow the normal pattern of the spinner.

Q79 Would you diagramatically indicate by a sketch (133) what that normal pattern would be, using phosphates as the product to be distributed, and using an Anthony material spreader as the source.

A You mean both? You want a sketch of each? That is, a sketch with a Jones device and a sketch without it?

Q80 No. Really, what I would like would be a sketch of the Anthony device of Plaintiff's Exhibit A with one of the end members lowered and with the other of the end members fully raised.

You just testified that if one of the end members were raised during operation of the machine, that the material being spread by the conventional Anthony impeller would assume a normal pattern.

A Yes.

Q81 I would like a top view to show what that normal pattern would be, as you understand it.

A With the fine material?

Q82 With phosphate.

A Yes.

Q83 Or with super phosphate.

MR. MOORE: Which is the question?

MR. KINNEY: Super phosphate.

It doesn't make any difference.

(134) A All right. It is super phosphate that we are going to spread now.

(Witness making sketch)

MR. KINNEY: Mark this Plaintiff's Exhibit F for identification.

(Thereupon said exhibit was so marked)

Q84 Will you now apply reference numerals, starting with 300 to your sketch, Plaintiff's Exhibit F and briefly explain what it shows.

A Fan No. 300 is shown distributing its material within the Jones enclosure.

Q85 Would you put a number on that enclosure, please.

A Enclosure No. 301. When the proper saturation is reached within enclosure 301 the falling material is indicated by arrows 302. Impeller 303 is distributing material 304 without the use of the Jones enclosure 305, which is now in a raised position. The arrows 304 indicate the high and uncontrolled pattern of the material as spread without the hood 305.

Q86 Now, directing your attention to Fig. 5 of the British patent, the Johnson, Plaintiff's Exhibit B, will you state what occurs to the pattern if one of shrouds 48 is lifted during operation of the Johnson device?

A Well, you would get a pattern as produced by (135) the combination blower and throwing device used in the Johnson pattern.

Q87 Would that pattern differ from the pattern produced by the other side of the device with the shroud lowered?

A Not to any great extent, inasmuch as the air used in this has induced considerable turbulence to the material. The hood acts as a directional means or concentrating means but the volume of air blows the material and doesn't establish a very definite pattern; in the Johnson device we have that outside air induced.

Q88 Directing your attention now to the Jones attachment and to the Johnson British patent, I should like to ask this question: Is the positive impeller type shown in Johnson's device equal, if not preferable to the horizontal disc of Jones device?

A In the Jones device we feel that the spinner used by Anthony was preferable because it gave us a re-circulating action which would be more difficult to get with the type used in the Johnson device.

Q89 In what manner does Johnson actually lay the phosphate or super phosphate onto the surface of the ground?

A Johnson actually blows the phosphate onto the (136) ground. He does not lay it on.

Q90 By blow, do you mean or imply that it would actually be blown with force at the time it engages the surface of the earth?

A That is right.

Q91 Directing your attention now to the small sketch on Plaintiff's Exhibit C which I shall ask you to mark as Fig. 2, will you please now add to Figure 2 a horizontal line to indicate the surface of the ground.

(Witness indicating)

And will you now indicate the manner in which this blowing occurs-that discharge?

(Witness indicating)

Does that occur during operation of a Jones attachment?

A No, it doesn't.

Q92 Will you then please add a figure 2 to Plaintiff's Exhibit F, indicating a horizontal line to show the ground and above that a section through a lowered hood of Jones in operation, and show how the material is discharged and deposited onto the ground.

(Witness indicating)

Will you use numerals, starting with 400 to explain the markings you have just made.

(137) A 400 indicates the hood of the Jones device. 401 indicates the flexible attachment between the hood and the ground. 402 indicates the circulating air which carries the material throughout the enclosure 400, and 403 indicates the material falling out of this concentration that has taken place in hood 400.

Q93 Mr. Duis, in your opinion, does this language aptly apply to the condition you have illustrated in Fig. 2 of Plaintiff's Exhibit F, that pulverulent material from a hopper is rendered airborne due to the rotation of the impeller means and will accumulate in sufficient concentration to affect a substantially uniform gravitational deposition through said open bottom unit without any appreciable blow-away of the material and thus effect a uniform application of the material on the ground?

A Yes, that is what I have illustrated in Figure 2.

Q94 Mr. Duis, referring again to the Johnson British patent do you find therein any suggestion that would permit the substitution of impeller type distributing units such as are illustrated in the Stoltzfus patent by the numeral 12 for the paddle wheel type distributors 34 and 33? Those last two numbers, 34 and 33, are observed in Fig. 3 of the Johnson patent.

(138) A If a substitution was made of the Anthony spinner for the Johnson rotor, an altogether different theory of material delivery would be created. There isn't any relation between the two, and to say that you would put on — you would substitute one spinner for another would completely change the basic principle on which the spreaders work.

Q95 Do you find in the British patent a central chamber which includes front, top and rear walls, and which is adapted to enclose the discharge port and impeller means which are secured to and carried by the bed of the truck?

A Well, the impeller means in Johnson are the part of Johnson's device and while it describes — or discloses a front and rear and top, it is that front and rear and top, are actually part of the impeller mechanism where in Jones, the Jones device has no bearing on the impeller mechanism. It simply encloses it but has no function in the working of the impellers.

Q96 In your opinion, is that an important distinction?

A Commercially it is because many spreaders are built that don't need the hood attachment or the spreading attachment. It can be applied or taken off at will. With the Johnson device it is a part of (139) the — It is all one. The Johnson device is a spreader unit itself.

Q97 Do you find any suggestion in the teachings of the Johnson patent that would lead one to suspend a flexible member from the lower edge of shrouds 48?

A Well, as long as they are blowing the material out, I don't think that a shroud would be too practical because you have a strong air current that would blow under the shroud.

Q98 What is the approximate cost of a limestone spreader?

A Say, a thousand dollars.

Q99 What would be the cost of a complete unit for limestone spreader including a truck, the body, and the spreading impellers?

A That question must be answered generally because there is considerable range in truck costs. I would say four thousand dollars would be a general answer.

Q100 What would be the approximate cost of a Jones attachment for such a limestone spreader?

A I think we sold the last ones we made for $365.00.

Q101 Now, when a Jones attachment would be used on a limestone spreader for spreading super phosphate what type of results were obtained?

A We obtained a very uniform pattern of distribution.

* * *

(140) Q104 Will you now briefly compare the theories of operation of the British patent to Johnson, that of Stoltzfus and that of the Jones device.

A The British device uses the induction of outside air into the hood as a carrying means to convey the fine material from the distributor to the ground. It blows the material over its pattern.

The Jones device uses the re-circulation of air within the hood to carry the material to the outer extremity of the hood and the addition of material into this re-circulating air stream builds up such a concentration that the material actually falls out of suspension onto the ground with no air — or no induced air current from the hood to the ground.

The Hoffstetter was your other —

(141) Q105 Stoltzfus.

A Stoltzfus simply hung a curtain around his fans to keep air currents from affecting the normal pattern, but claims nowhere, and by the open construction of the front of his hood, he has made no attempt to take the air currents and employ them to convey the material out to a given pattern. He is simply protecting the normal pattern from wind or foreign air currents.

Q106 Now, to recapitulate what you have just said, the British patent utilizes a positive air stream and a spatting action of the paddle wheel members 33 and 34 for projecting material through the shroud. It falls upon the ground — It is blown onto the ground by reason of that air stream and the shrouds do not affect the pattern of the projected stream.

In Stoltzfus the curtains have merely been placed around the normal pattern produced by impellers 12. In the Jones attachment will you now state whether the pattern, the normal pattern of distribution of the impellers is altered by reason of the attachment?

A Yes, it is altered because the impellers are now used not to create a pattern of their own but to fill the hood with material to the degree that it falls to the ground. The spinner now has no pattern of its (142) own.

* * *

(143) CROSS EXAMINATION

By Mr. Moore:

Q115 The Anthony Company at one time held an exclusive license on this patent application of Aubrey L. Jones, Serial No. 95114, did it not, Mr. Duis?

A Yes.

Q116 On a date certain in 1952 where the Anthony Company ceased making limestone spreaders, it likewise ceased to make any devices for Mr. Jones, or under the agreement with him, is that right?

A That is right.

Q117 Now, will you refer to Plaintiff's Exhibit A which, as I understand, is a circular distributed by the (144) Anthony Company, is that true?

A Yes.

Q118 Isn't it true that the device shown in the upper lefthand cut includes three elements?

A That is this one?

Q119 Yes.

A Yes.

Q120 One a truck, is that true?

A That is right.

Q121 That is supplied by others than the Anthony Company, isn't that right?

A Yes.

Q122 It is such a truck as a farmer might have on his farm?

A That is right.

Q123 Now, Item 2 of the showing of that figure is a limestone spreader such as the Anthony Company made up until 1952, is that true?

A That is right.

Q124 That limestone spreader had as integral elements what you referred to as spinners, right?

A Yes.

Q125 It had two spinners, didn't it?

A Yes.

Q126 You call them twin spinners?

(145) A I think that is right.

Q127 One of them is shown, is it not, in the lower cut at the right hand of that circular?

A Yes.

Q128 There was one opposed to that?

A That is right.

Q129 Now, the third item in the showing of the upper left hand cut of Plaintiff's Exhibit A is a shroud and that shroud was contributed by Mr. Jones?

A That is right.

Q130 There was never such a thing as a Jones spreader, was there?

A We referred to it as a Jones spreader but in the literature it was called an Anthony spreader and a phosphate spreader.

Q131 But Mr. Jones contributed to the existing limestone spreader sold by Anthony Company a shroud for attachment at the end of the spreader?

A That is right.

Q132 And covering the twin impellers?

A That is right.

Q133 Now, the reason for that shroud, was it not, was to control the "blow-away"?

A That is right.

Q134 And the spinners within the shroud created a (146) turbulence in the shroud, did they not?

A That is right.

Q135 That turbulence is indicated in the lower cut on the right hand side of Plaintiff's Exhibit A, isn't that true?

A Yes, that is right.

Q136 Now, aren't there various farm fertilisers which also have somewhat the lightness of super phosphate?

A That is right. We only referred to that because of its popularity.

Q137 Well, isn't it true that such an ordinary farm fertiliser as 5-10-5 will have some eight per cent of other materials than fertilisers?

A I am not familiar with the composition of fertilisers as such.

Q138 Well, don't you know that talc is a constituent of such a fertiliser as the fertiliser designated 5-10-5?

A No, I didn't know what that meant.

Q139 The showing of Plaintiff's Exhibit A in the lower right hand corner and the showing in Plaintiff's Exhibit A of the intermediate figure on the left hand side is a showing of the Jones shroud when it is wanted to travel on highways or get through gates, isn't that true?

(147) A That is partially true. A coarse limestone may be spread with it in that position also.

Q140 That is a limestone spreader without the Jones shroud?

A That is right.

Q141 Now, will you refer to that Johnson British patent which is Plaintiff's Exhibit B and tell me whether or not that patent is concerned with the distribution of super phosphate?

A Actually the device would be a poor super phosphate spreader.

Q142 But the fact of the matter is, however, that Johnson on Page 3 of his specifications in that patent in the first column beginning at Line 9 does say that his invention relates to machines for spreading, among other things, super phosphates, right?

A Yes. I have found it.

Q143 Now, refer, Mr. Duis, will you please, to Page 5 of the specifications in that patent, beginning at Line 103.

A Is that the beginning of a sentence?

Q144 It is the beginning of a clause but if you want to go back to the beginning of a sentence, that is quite all right.

(148) A That would be, "confines of the machine and ensure that as the machine moves along, the powder is spread in a substantially uniform manner over a maximum area of the ground disposed laterally of the path of the machine."

Q145 In that quotation you have just read into the record do you find any reference to a substantially uniform manner of spreading of the powder?

A That is right.

Q146 Which could include in the term powder, super phosphates?

A That is right.

Q147 That statement that you have just read from the specifications of the Johnson patent is repeated to an extent on Page 3 of the specifications in the paragraph beginning at Line 9?

A Do you want this read?

Q148 No, just answer that question.

A Well, it is true that they state that it will spread it and that it will, but the turbulence in so spreading it is the reason that the Anthony Company wasn't interested in that type of spreader.

Q149 But the Johnson patent says that the super phosphate is spread uniformly, isn't that true?

A That, of course, we question.

(149) Q150 But the statement is made in the patent?

A That is right.

Q151 And neither you nor the Anthony Company ever made an embodiment of the device shown in the drawings and described in the specifications of this Johnson patent?

A No.

Q152 And of course, you never operated such an embodiment?

A No.

Q153 Now, you have referred in your discussion of the Johnson patent to the induction of air. Are you referring in that connection to Figure 7 of the Johnson patent?

A Yes.

Q154 One more question on that Johnson patent. Let's turn again to Page 5 at Line 91. In the section that includes Line 91 Johnson refers, does he not, to the fertiliser "gravitating out of the stream"?

A That is right.

Q155 In other words, particles inside the shroud fall by gravity to the ground?

A That is right.

Q156 With respect to the impellers such as members 33 and 34 in the Johnson patent, the material falling (150) on those impellers is projected, is it not, transversely of the path of the machine?

A That is right.

Q157 And in the showing of the lower righthand figure of Plaintiff's Exhibit A fertiliser falling upon the spinner there shown is projected by centrifugal action, isn't it?

A The projection of that fine material by centrifugal action alone is very ineffective. It must have the air with it to carry it any distance.

Q158 Don't particles emerge from the spinner much like sparks from a rocket, revolving rocket?

A Well, they emerge with centrifugal force but they would carry through, say, still air a very, very limited distance because they are extremely fine and light. That is why the air enters into this.

Q159 Let's refer to the Stoltzfus patent, Mr. Duis, and particularly to Lines 7 and 8 of Page 1 of the specification, the first column, and to Lines 17 through 25 in the second column.

Will you read such of that material as you want to and then tell me when you have read it.

A The next one was 25?

Q160 Beginning at Line 14, if you will, or 17, (151) either one.

A How far did you want me to carry down on this?

Q161 I wanted you to refer particularly in the first column to Lines 7 and 8.

A Yes.

Q162 And in the second column to Lines 20 and 21 but I wanted you to get so much of the context as you needed there.

A Yes.

Q163 There is a suggestion that the two portions of that Stoltzfus patent that you read, Mr. Duis, is there not, of the uniform distribution of the fertiliser upon the ground?

A That is right.

Q164 Let us refer for the first, last and only time to the claim of this Stoltzfus patent appearing in the second column on Page 2, and let's have you state whether or not that claim doesn't indicate by reference to the curtains, how the spreading of the material is restricted?

A Well, to me, they describe curtains to protect the pattern of the spinner from wind.

Q165 And the claim states that the curtains do restrict spreading of the material beyond a given distance from the body?

(152) A Yes.

Q166 And in such a figure as Figure 3 of the Stoltzfus patent, Stoltzfus does show twin spinners, doesn't he?

A Yes.

MR. MOORE: I will close Cross Examination with that.

REDIRECT EXAMINATION

By Mr. Kinney:

* * *

(153) MR. KINNEY: Q170 Tell what occurs when an Anthony spreader provided with a Jones attachment, as in Plantiff's Exhibit A, is operated utilizing super phosphate with the Jones device in the position indicated in small photograph "R" of Plaintiff's Exhibit A in a large barn.

A I think the answer to that is you would fill the barn with dust.

Q171 Would the barn be filled with dust although all the doors of the barn were closed and the unit operated with the ends elevated?

(154) A With the ends up. Well, what would happen, you would get a pattern, a normal pattern that the spinners would make and in a small area your overspread of dust would be considerable. It would be a rather broad pattern.

Q172 Now, if you operated the same device on the same superphospate in the same closed barn and lowered the end members of the Jones device to the position illustrated in the photograph "S" of Plaintiff's Exhibit A, what would occur?

A You would have very little dust, only the leakage that might be around the —

Q173 What pattern would be established on the barn floor?

A The one controlled by the size of the hood on the Jones device.

Q174 Now, if you take an Anthony device provided with a Jones attachment filled with the — Anthony spreader is loaded with superphosphate in all these questions — and went out into an open field and operated the device with the hoods lower as in photograph "R" of Plaintiff's Exhibit A, what would occur?

A You would get a uniform distribution over the pattern of the device.

Q175 If the truck were to remain stationary outside, would the pattern — in what manner would
(155) the pattern differ — or rather, compare the pattern, the resulting pattern, with the pattern that you would get when the device was operated in a closed barn with the shrouds lowered.

A Well, there would be no difference.

Q176 Now, would you say, therefore, that the sole purpose of the Jones device, then, is to control blow-away?

A No. It is to establish a pattern.

Q177 Is that pattern the same, whether you are in an enclosed area or out in the open or whether you are in wind, assuming the device to be in the position shown in photograph S?

A When the device is in that position, it makes very little difference whether there is wind or not wind.

Q178 When the device is in the position illustrated in the photograph R, Plaintiff's Exhibit A, it permits, I believe you stated, for the device to be easily passed through gates and other openings, is that true?

A That is right.

Q179 Is that the main purpose for elevating that device as illustrated in photograph R?

A That is one of the purposes.

(156) Q180 And what is the other purpose?

A And the other purpose is when spreading coarse material the device has no advantage. In fact, it is a disadvantage.

Q181 In actual practice is spreading done with the parts indicated as shown — or the parts positioned as indicated in photograph R of Plaintiff's Exhibit A?

A Yes.

Q182 With reference, now, to the Johnson patent, Britain, I believe you indicated that you considered that patent at one time. Will you elaborate upon that.

A Well, it was considered as a possible device to be made by the Anthony Company.

Q183 Did you ever have a conversation with a representative of your company who actually saw a Johnson device?

A Only on paper.

Q184 You mean by that it was by correspondence?

A Because we didn't see any Johnson device other than in the patent.

Q185 Referring now to the Johnson patent, Plaintiff's Exhibit B, I direct your attention to Page 7, Lines 15 through 21.

(157) A Yes.

Q186 Will you read into the record, please, starting with Line 15 through 21.

A "In this way, the impact member is enabled to act as a centrifugal fan, drawing in air along an axial path and delivering it along a tangential path, the current of air thus projected along the shroud carrying with it at least the finer particles of the stream of fertiliser."

Q187 Does not it say "the finer particles of the stream of fertiliser"?

A Yes, "finer particles".

Q188 Now, you have indicated that the Johnson patent refers to a device that is adapted to uniformly spread material such as and including superphosphates. Do you find anything in the Johnson patent which would indicate that superphospates can be spread without the use of this stream of air referred to on Page 7, Lines 15 through 21?

A You must have a stream of air to spread super phosphate.

MR. KINNEY: That is all.

RECROSS EXAMINATION

By Mr. Moore:

Q Prior to the advent of the Jones shroud as shown in Plaintiff's Exhibit A the Anthony Company was (158) selling a limestone spreader that was satisfactory in spreading a material as heavy as limestone?

A That is right.

* * *

(159)

Raymond F. Hatala,

called as a witness on behalf of the plaintiff, having been first duly sworn, testified as follows:

DIRECT EXAMINATION

By Mr. Kinney:

Q1 Will you please state your name, address and occupation.

A Raymond F. Hatala, 211 Cedar Street, Streator, Illinois; sales and service, the Anthony Company.

Q2 Are you the same Ray F. Hatala who on the 14th day of August, 1951, executed an affidavit in LaSalle County before Loretta M. Mulcahy, said affidavit to be used before the United States Patent Office in the Matter of the Patent Application of Aubrey L. Jones, No. 95114?

A I am.

Q3 Will you state the normal pattern imparted to granular materials such as sand when distributed by an Anthony spreader?

A Well, the pattern would assume a fan shaped outline to the rear of the vehicle and would probably have an over-all width in the neighborhood of twenty-eight to thirty-five feet.

Q4 Would you now, please, draw a top view of the (160) ground pattern that would result when granular material such as sand would be distributed by an Anthony spreader.

A It assumes such a pattern (Indicating).

Q5 Now, will you please indicate the pattern to which you have just referred by the numeral 500.

On that same sketch will you now indicate, using this pen that I am handing to you, the pattern, the ground pattern that would result, using the same machine but wherein the product distributed is super phosphate, for indicating area differences.

You have not indicated the "500".

A You want to indicate "500" in this group here and point to it with an arrow. Am I right in that? That is "500" designation of this pattern.

Q6 Now, on that same sketch will you please indicate, using ink, the pattern, the result when super phosphate was spread with the same machine.

A Well, you would have the similar pattern with a billowing effect from the light material which would be thrown outward and upward. It is going to be difficult but I will show the arrows thus (Indicating).

Q7 Now, will you put on that figure in ink the peripheral extent, as it were, of the pattern resulting when superphosphate is spread with the regular (161) Anthony spreader, that is, when it does not have a Jones attachment on it.

A In other words, you wish to outline the —

Q8 If you would, please.

(Witness indicating)

And now, will you please indicate that outline by the numeral "510".

Mr. Hatala, have you had any personal experience in use of limestone spreaders equipped with the Jones spreader attachment?

A I have demonstrated and sold, conducted field demonstrations of all types with the Anthony spreader and the Jones attachment.

Q9 Will you indicate how the pattern or what pattern results when a Jones attachment is mounted to and lowered into the operative position illustrated in Fig. S of Plaintiff's Exhibit A?

A This is S here?

Q10 Yes.

A You want it looking down from the top, as I understand that?

Q11 Please. Now, if you would superimpose that on the two drawings you have already made, doing so in heavy dotted outline, please. Will you indicate that outline, please, by the numeral "520".

(162) (Witness indicating)

MR. KINNEY: Would you please mark this Plaintiff's Exhibit G and mark this Plaintiff's Exhibit H.

(Thereupon said exhibits were so marked)

Q12 I direct your attention to Plaintiff's Exhibit H, and in particular, to the photograph appearing immediately above the initial "P" that I just put on in ink, and ask you to state what that photograph discloses.

A The photograph is an Anthony agricultural spreader, as we termed it, with the latest improvements.

Q13 Is that device commonly known as a "limestone" spreader?

A Yes, it is.

Q14 Are similar devices manufactured by concerns other than Anthony?

A Yes.

Q15 Directing your attention now to the photograph of Plaintiff's Exhibit H immediately above the pencilled notation "Q", will you state what that photograph discloses.

A This is a photograph spreading material, and as I recollect, it is an actual picture of a field spreading operation. The material can be phosphate, limestone with fine pulverulent material in it. It could (163) even be phosphate. As to the exact material, it is hard to remember just from the photograph, but it does have fine material in it, and you can see that blowing away from the photograph.

Q16 To your own knowledge, is that a typical distribution pattern that would be obtained were the machine on the other side, photograph "P" utilized to spread superphosphate?

A That would be a typical pattern, generally speaking.

Q17 Directing your attention now to Photograph "S" of Plaintiff's Exhibit A will you compare what is shown in photograph S of Plaintiff's Exhibit A with what is shown in photograph Q of Plaintiff's Exhibit H.

A Well, in Exhibit H the material, the pulverulent powdered material, is free to be carried away and beyond a given pattern.

Q18 Might I interrupt right there. Would that pattern correspond to the pattern indicated by the numeral "510" of Defendant's Exhibit G?

A That is true.

A In other words, you wish to outline the —
Q8 If you would, please.

(Witness indicating)

And now, will you please indicate that outline by the numeral "510".

Mr. Hatala, have you had any personal experience in use of limestone spreaders equipped with the Jones spreader attachment?

A I have demonstrated and sold, conducted field demonstrations of all types with the Anthony spreader and the Jones attachment.

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Q16 To your own knowledge, is that a typical distribution pattern that would be obtained were the machine on the other side, photograph "P" utilized to spread superphosphate?

A That would be a typical pattern, generally speaking.

Q17 Directing your attention now to Photograph "S" of Plaintiff's Exhibit A will you compare what is shown in photograph S of Plaintiff's Exhibit A with what is shown in photograph Q of Plaintiff's Exhibit H.

A Well, in Exhibit H the material, the pulverulent powdered material, is free to be carried away and beyond a given pattern.

Q18 Might I interrupt right there. Would that pattern correspond to the pattern indicated by the numeral "510" of Defendant's Exhibit G?

A That is true.

Q19 Will you continue your answer.

A The answer was Yes, that the "Q" is in likeness to the drawing "510" or which is labed "510". Now, (164) in the drawing labeled "S", or the photograph, rather, labeled "S", the likeness — this is on Plaintiff's Exhibit A — the likeness under "S" then is as shown in the drawing labeled "520" on Plaintiff's Exhibit G.

Q20 Mr. Hatala, would it be possible to utilize a Jones attachment for spreading limestone in those instances wherein but one impeller such as 14 is utilized such as illustrated in Figure 1, comprising part — Figure 1 of the drawings, comprising part of the Aubrey L. Jones application, Serial No. 95114?

A As I understand, are you saying that it will work with one?

Q21 I am inquiring, will it work with one?

A It will work with one or more.

Q22 Directing your attention, now, to the British patent, to Johnson, Plaintiff's Exhibit No. B, will you explain briefly your understanding of how distribution of a highly pulverulent material such as superphosphate is accomplished.

A Referring to the basic mechanism here, and we will use Figure 5 because it does show material, when the material reaches the fan it is mixed with a high volume of air plus an impact of an impeller forcing the material or projecting it outward, then being (165) deflected by a cover which causes it to turn earthward with force. This principle here deals entirely with forceful air borne particles and possibly difficult to control.

* * *

Q23 Directing your attention to Figure 5 of the Johnson patent, will you state whether the interior of shrouds 48 are filled with material?

A Not having actually seen the unit in operation or any model, it can be assumed because of the forced air stream that there will be a filling or at least a partial filling of it.

Q24 Directing your attention now to Plaintiff's Exhibit I which is an enlarged photostatic print of the drawing of Plaintiff's Exhibit B, I ask you to state whether or not that figure shows the limits of the material being projected by the rotating members?

(166) MR. MOORE: I object to that question as inadequate reference to the drawing. That is a photostat of one sheet of the two sheets of the British patent, is it not?

MR. KINNEY: Yes, it is just one sheet of the two sheets. I didn't mean to mislead.

MR. MOORE: No, I just thought it ought to be properly indicated in the record.

MR. KINNEY: It is really Sheet 2.

MR. MOORE: If you will so identify it, I withdraw my objection, just for the purposes of accuracy.

MR. KINNEY: I will be happy to identify it. It is Sheet 2.

THE WITNESS: Now, will you re-state the question?

(Thereupon the question was read)

(Being Question No. 24)

A Yes, it does show the material being projected into the housing.

Q25 Does that figure indicate that the space occupied by the numeral 49 contains air borne material?

A Well, the way it is so indicated on the drawing here would lead one to believe that there would be no material in that particular portion.

Q26 Directing your attention now to that portion of Plaintiff's Exhibit I immediately to the left of the numeral

"'49" and above the paddle wheel which is (167) not designated, will you state whether that area contains air borne material?

A Well, according to the shading in the drawing, and assuming that the unshaded portion does not contain any material, therefore, the unshaded portion here would not have any airborne particles in it, judging from the lines as drawn here on this identification.

Q27 Mr. Hatala, from your experience with the spreading of superphosphate would it be possible for the British Johnson patent to be operated to spread super phosphate without utilizing auxiliary air?

A The heavier particles in superphosphate might be impacted and carried a distance but through the use of the air which would forcefully drive the finer particles carrying it along with the heavy, would be my explanation of this particular operation on super phosphate.

Q28 Mr. Hatala, have you studied the Stoltzfus patent, Plaintiff's Exhibit D?

A I have.

Q29 Will you state the purpose of canvas member 21, as explained in the Stoltzfus patent.

A Well, according to the explanation of the curtain, it is to prevent the winds from affecting the pattern (168) of material spread by the fans.

Q30 Will you now please direct your attention to Fig. 2 of the Stoltzfus patent and will you indicate directly on that figure your understanding of the distribution pattern of the impellers 12.

A I will say that it assumes a pattern of that nature.

Q31 Would you please now indicate with the numerals "600" the outlines that you have just added.

(Witness indicating)

Mr. Hatala, do you find anything in the Johnson patent which would indicate that the impellers 33 and 34 could be interchanged with a disc type impeller such as 12 of the Stoltzfus patent?

A In other words, you are asking could the spinner type fan be installed in a Johnson machine and work — and not without considerable re-design for reasons of the exterior holes which admit air in the Johnson patent.

Q32 Referring to the Johnson patent and in particular Fig. 5 thereof, will you indicate what type of ground pattern would result were the device operated with the vehicle standing still?

A Well, in describing the ground pattern here, you may describe it as a likeness, say, of the shadow (169) of the exterior outline of the unit but you would have a billowing effect as the material strikes the ground and moves way from the path because of the propelling air force that is behind.

Q33 Now, if the Johnson device were operated on a granular material such as sand, and if the air openings 72 and 73 of Fig. 7 were closed so that there was no auxiliary air effect, what pattern would be developed with the device stationary?

A I would say you would have a stream of material projected in an arc or curve away from the fan and up, striking the top of the cover 48, and then being deflected down to the ground.

Q34 What would determine the width of that pattern?

A Well, there is a baffle at the end of the unit No. 70 which would restrict or deflect down any material striking this member.

Q35 What would affect the depth of that pattern?

A What would affect the depth?

Q36 Or what would determine the depth of the pattern?

A Well, the width of the paddle wheels would determine the width of the stream coming out and being projected away from the paddles.

(170) Q37 Now, if the Johnson device were operated on a heavy or granular type of material without using the air, accomplished in Fig. 7 by apertures 72 and 73, and if during operation one of the two shrouds, 48, was lifted upwardly to the position indicated in Fig. 2 of the Johnson patent, what would be the resultant pattern on that side where the shroud has been fully elevated?

A The pattern would not be too much different. The material again would be deflected or projected, rather — projected outward and upward in a stream, and then would fall upon the termination of the velocity. In other words, when a material reached the end of the propelling force it would have a tendency to fall to the ground.

Q38 And would the depth of that ground pattern differ from the depth of the ground pattern on the other side where the shroud would be lowered?

A Well, it definitely would. It would be greater, depending upon the weight of the material and the impact force throwing it.

Q39 What determines the depth of the projected path?

A You are talking about the width from the truck now, or only the stream that is projected out?

(171) Q40 I was using the stream that we were referring this way as a width and this way for the —

A Depth?

Q41 Depth.

A The width of the paddle wheel would, of course, determine the width of the stream that is being projected outward.

Q42 Then it is your testimony that if the shroud 48 should be elevated, the width of that stream would change by reason of the shroud having been elevated?

A Will you repeat that?

(Thereupon the question was read)

No, I don't believe that to be true because the material here is being projected in a given width stream. The deflector merely causes a change in direction as it strikes the top of this shield 48, which causes the material to be deflected toward the ground.

Q43 It is your testimony, then, that the width of that stream would be equal to the length of the impellers, whether the shrouds 48 be elevated or lowered?

A There would be no change in the width of the stream, whether the shrouds are raised or lowered.

(172) Q44 Mr. Hatala, are you familiar with the Hoffstetter patent, Plaintiff's Exhibit E?

A I am.

Q45 Have you ever observed the operating characteristics of a device embodying the teachings of the Hoffstetter patent?

A I have seen the unit — versions of the unit in operation in actual field demonstrations, have examined it.

Q46 Is it possible to operate the Hoffstetter device with the outer endmost sections 20 in elevated position?

A If the outer extremities of this device should be elevated, the material pours forth in more or less a stream, depending upon the width of the tube. In other words, wherever the end of the tube is, the material would pour out at that particular point.

Q47 Now, referring to Figure 3, outer section 20 is pivoted at 26 to a central section indicated in Fig. 1 by the numeral "19", is that correct?

A Well, section 20 is pivoted about 26, according to the drawing as I read it.

Q48 Now, in your second to last answer you indicated that the material would pour out of the end. Will you identify on Fig. 3 what you mean by pour out of (173) the end?

A Well, the material is conveyed from the center outward in a tube and if the tube is open, of course, this tube has slots and as it is being conveyed across these slots, you are losing some of the material but this conveyor here is conveying it faster than the tubes will — It is conveying it faster than can be discharged through the tubes. Therefore, there would be a spillover. There is nothing to identify it other than the dividing line or connection of those two at the pivot point 26. In other words, it would fall down from a point below 26. Do you want me to draw some type of —

Q49 No, I think your answer is sufficient. You said it would fall below point 26. Why are the outer ends of the Jones attachment hingedly secured to the central portion?

A Will you repeat that again?

(Thereupon the question was read)

To provide means for folding the unit up when spreading other materials than light fine pulverulent. In other words, the attachment is not necessary for spreading heavy materials.

Q50 Would the Hoffstetter device be operated when spreading heavier materials with the end portions 20 (174) swung upwardly?

A This device, as I understand, is purely for the spreading of fine pulverulent materials and to keep it close to the ground. I don't know of any usage where heavy materials have been used in this type of equipment.

Q51 Do you find anything in the Johnson patent which might suggest the desirability of suspending a flexible material from the lower edge of shrouds 48?

A There is nothing that I recall of having read in there that might suggest that you could extend the hood downward. I think the fact that the forced air is used, the intent is to deflect or project this material toward the ground.

Q52 Is it your testimony, then, that when Johnson is utilized to handle pulverulent material such as superphosphate, wherein auxiliary air is utilized to assist in the projection of the material as set forth in Lines 5 through 21, Page 7 of the Johnson specification, that the outspreading resulting from the use of air is a sought-for result?

A Well, I would say that through the use of the forceful air to project out and downward would not be a desirable condition. It would be an uncontrollable condition.

(175) Q53 To your knowledge, what effect did the Jones attachment have on the technique of spreading super phosphates?

A Well, having reached a point where we were confronted with the spreading of fine, pulverulent material we sought an answer to this problem and with the Jones attachment we were able to successfully spread material which had been heretofore impossible.

Q54 Had there been other devices on the market which were designed to effectively spread super phosphates prior to Jones?

A I am not sure whether the Hoffstetter type machine came out prior or about at the same time. It is the only other device that I have encountered in field demonstrational work.

Q55 Throughout what territory do you demonstrate?

A Well, I have covered the midwestern states and I have gone into Canada.

Q56 Have you ever observed the Jones type of attachment utilized with spreaders made by concerns other than the Anthony Company?

A I have seen duplications of this device used by other companies.

* * *

(176) Q62 In conclusion, will you briefly state exactly what the Jones attachment does to the distribution (177) pattern when superphosphate is being spread by an Anthony spreader?

A Well, in describing the action of the unit, the Anthony spreader in conjunction with a Jones attachment, the particles are distributed or airborne circulated within the hood and allowed to settle to the ground through gravitational force. The hood is an entire enclosure in which the air within it is circulated.

MR. KINNEY. That is all.

CROSS EXAMINATION

By Mr. Moore:

Q63 Mr. Hatala, will you refer to the sketch you prepared, Plaintiff's Exhibit G, and tell me whether or not you have indicated twin spinners in that sketch?

A There are twin spinners indicated on the sketch G.

Q64 The word "spinners" is synonomous with impellers, isn't it?

A Right.

Q65 Referring, Mr. Hatala, to Plaintiff's Exhibit H, the exhibit refers, does it not, to twin spinners?

A In this particular unit, yes.

Q66 Now, you are familiar with the Stoltzfus patent, (178) Plaintiff's Exhibit D, and there is shown in Figure 1 particularly of that patent a shroud of fibrous material, is there not?

A Right.

Q67 And as indicated by the line on which the wheel of the spreader rests, the shroud is close to the ground, is it not?

A That is right.

* * *

REDIRECT EXAMINATION

By Mr. Kinney:

* * *

Q68 Mr. Hatala, I hand you Plaintiff's Exhibit J and ask you to refer to the uppermost picture on which I am now putting the ink notation "Y", and can you state what that is?

A This is an attachment similar to the Aubrey Jones (179) unit.

Q69 And that attachment is by what concern, please?

A This attachment is manufactured by the Baughman Company at Jerseyville, Illinois.

Q70 I shall now direct your attention to a photograph which I am indicating by the letter "V", comprising part of Plaintiff's Exhibit J and ask you to state what that is?

A Well, if I understand your arrow correctly you are pointing to a spreader similar to the Anthony but differs in this respect, that it has a single fan instead of twin fans.

Q71 May I now direct your attention to the photograph identified by the ink letter "Z" comprising part of Plaintiff's Exhibit J and ask you to state what that is?

A Well, it is a typical open-air pattern without any attachment on it such as one would encounter in spreading limestone or phosphates, any type of ground materials.

Q72 Would a similar pattern be established spreading superphosphate?

A A similar pattern would be established spreading superphosphate.

Q73 Is that pattern obtained from the single spinner (180) of the device of photograph "V" of Plaintiff's Exhibit J?

A Well, assuming the unit is a single fan, the pattern is definitely that depicted in the picture.

Q74 Have you ever seen a Baughman single impeller —

A That is his standard unit.

Q75 The Baughman standard unit, then, has but a single impeller, contrasted with a double impeller of the Anthony Company?

A That is right.

Q76 Directing your attention again to protograph "Y" of Plaintiff's Exhibit J, is that spreader attachment associated with a single impeller device?

A The standard model is associated with a single spinner.

Q77 Have you ever seen such a device in operation? I am now referring to that similar to photograph "Y" of Plaintiff's Exhibit J?

A I have both seen the unit in operation, have competed in field tests with similar units.

* * *

(181) RECROSS EXAMINATION

By Mr. Moore:

Q The Baughman spreader for limestone includes a single rotary impeller, is that true?

(182) A That is right. They have as optional equipment a twin fan, as the literature will reveal.

MR. MOORE: No further questions.

MR. KINNEY: That is all.

I introduce into evidence Plaintiff's Exhibits A through J.

PX A
4

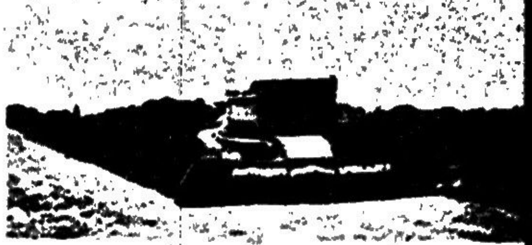
'ANTHONY COMPANY

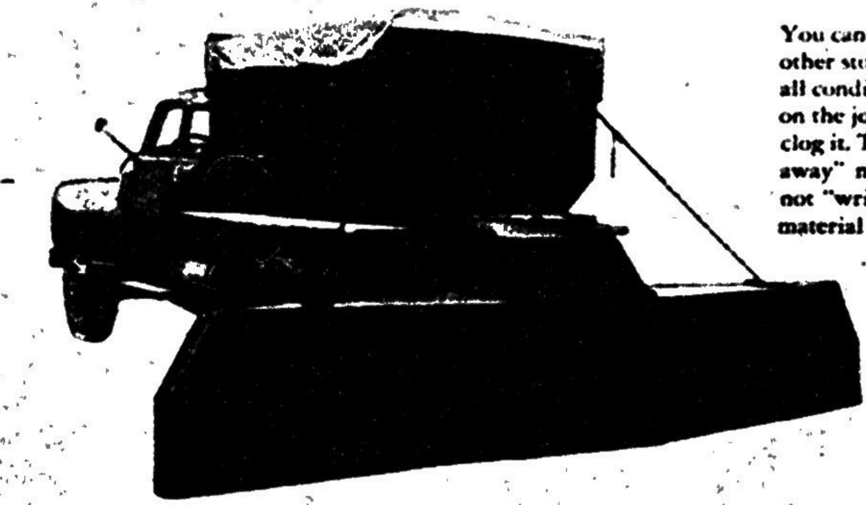
PHOSPHATE SPREADER ATTACHMENT

Patents Pending

Out-Performs them All!

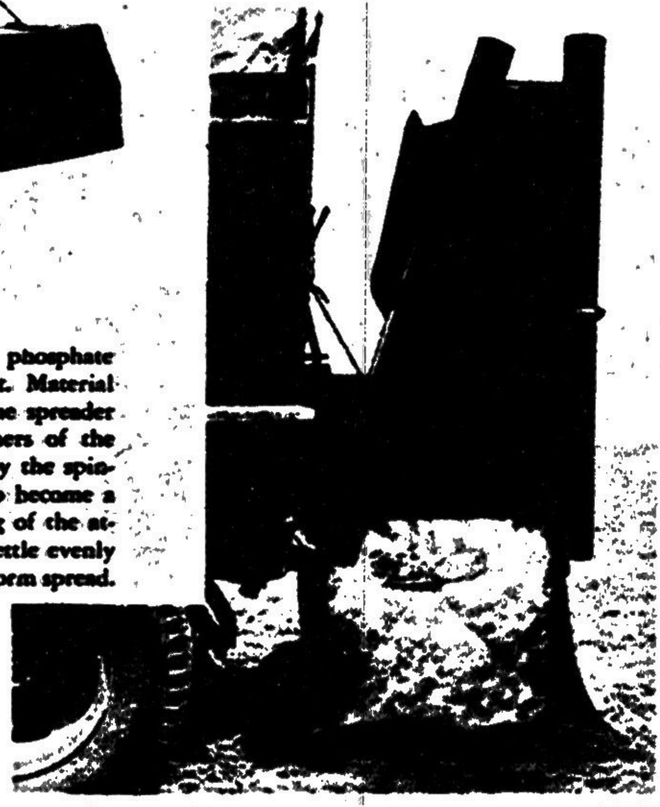
Farmers prefer ANTHONY quality spreading! You can earn more money, get more jobs, with Anthony heavy duty lime and material spreaders for spreading aglime, chips, cinders, sand, etc. With the Anthony phosphate attachment, which is recommended for all fine and super fine ground material, you can do custom spreading at lowest cost. The Anthony phosphate spreader is light weight (only 290 lbs.) strongly constructed throughout for years of costless operation—no gears, belts, chains or screws to wear and get out of order— one man operation for spreading of coarsest to finest materials. Even in strongest wind "blow away" is negligible. Overall width is 16½'. One mile distance traveled covers 2 acres.



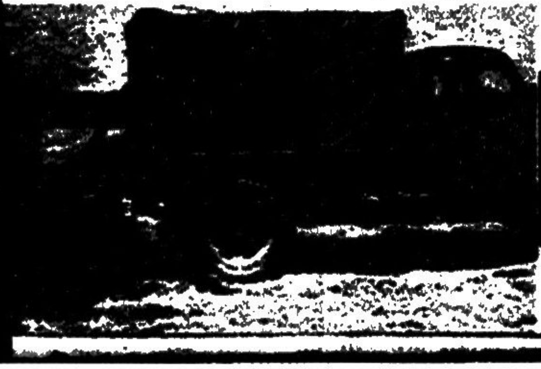


You can spread rock phosphate, super-phosphate or any other stock piled or sacked commercial fertilizers under all conditions—windy days will not prevent you getting on the job—lumps, sticks, stones, paper or weeds cannot clog it. Three ply rubber laminated curtain makes "blow away" negligible. Rubber curtain, unlike canvas, will not "wrinkle", blow out, or become stiff with clinging material and it is not affected by mildew.

The principle of the Anthony phosphate spreader is illustrated at right. Material slowly being conveyed from the spreader box falls onto the twin spinners of the spreader. Turbulence created by the spinners causes the fine material to become a dense cloud within the housing of the attachment where the particles settle evenly to the ground for complete uniform spread.



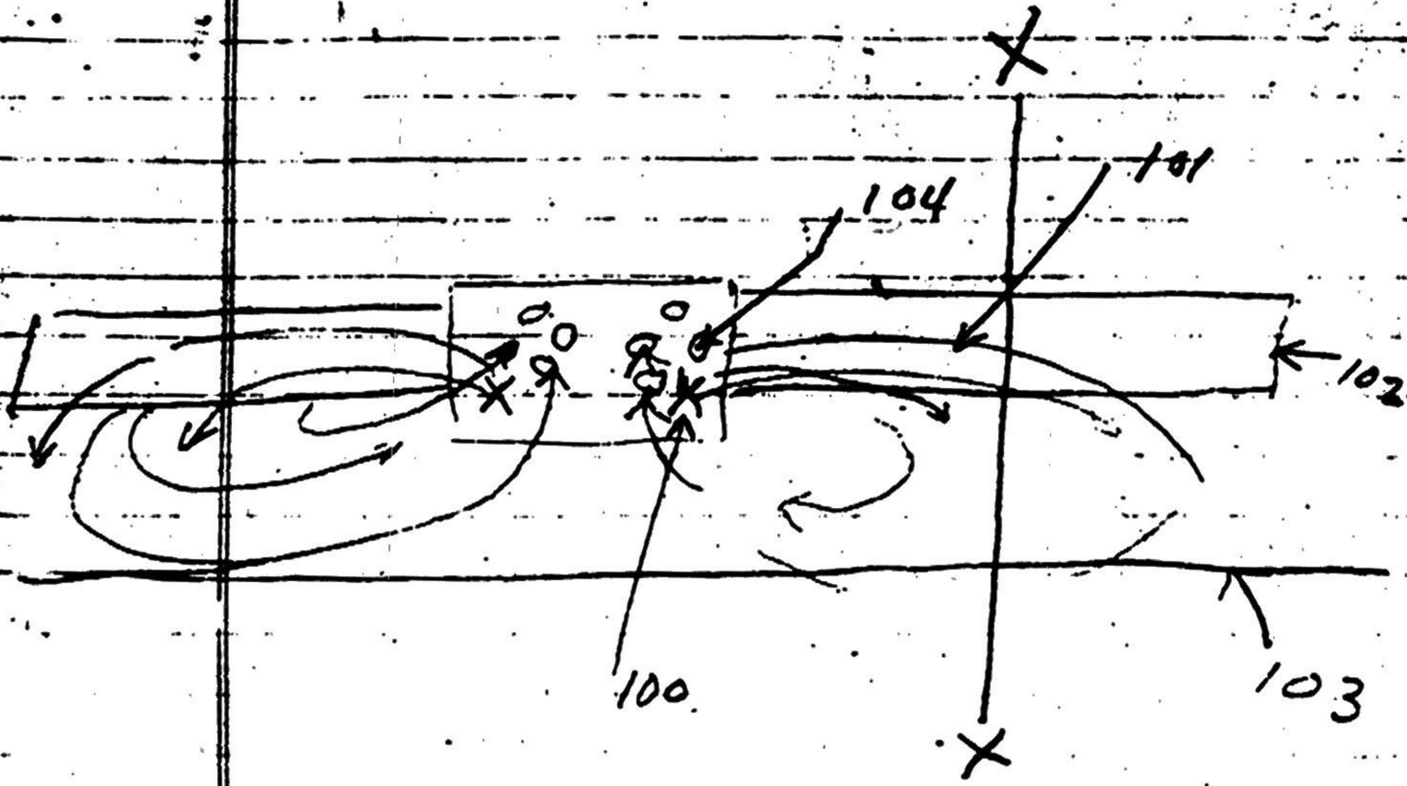
View above shows Anthony phosphate spreader folded up for spreading aglime, chips and coarse materials, in customary manner. In a few minutes one man can fold it up for transportation on the highway, too. View below shows rubber curtain all around laying an even spread of material



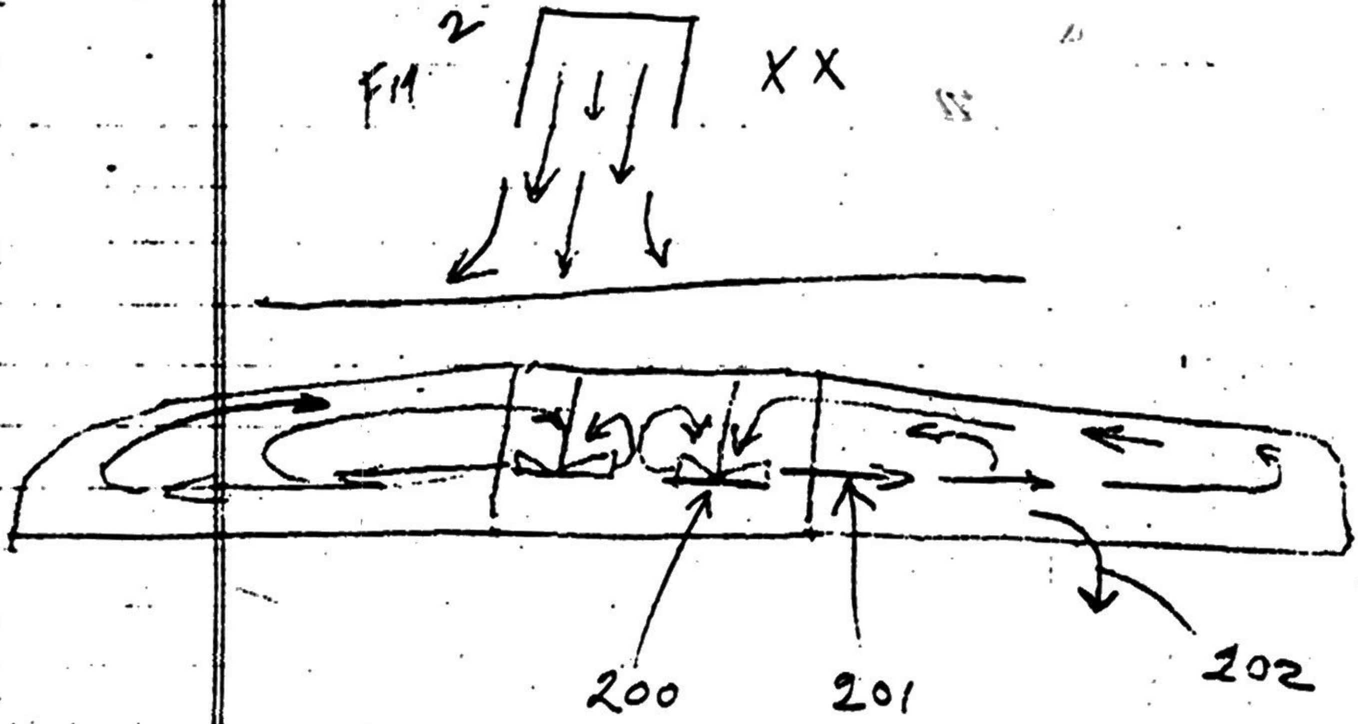
ANTHONY COMPANY

STREATOR, ILLINOIS

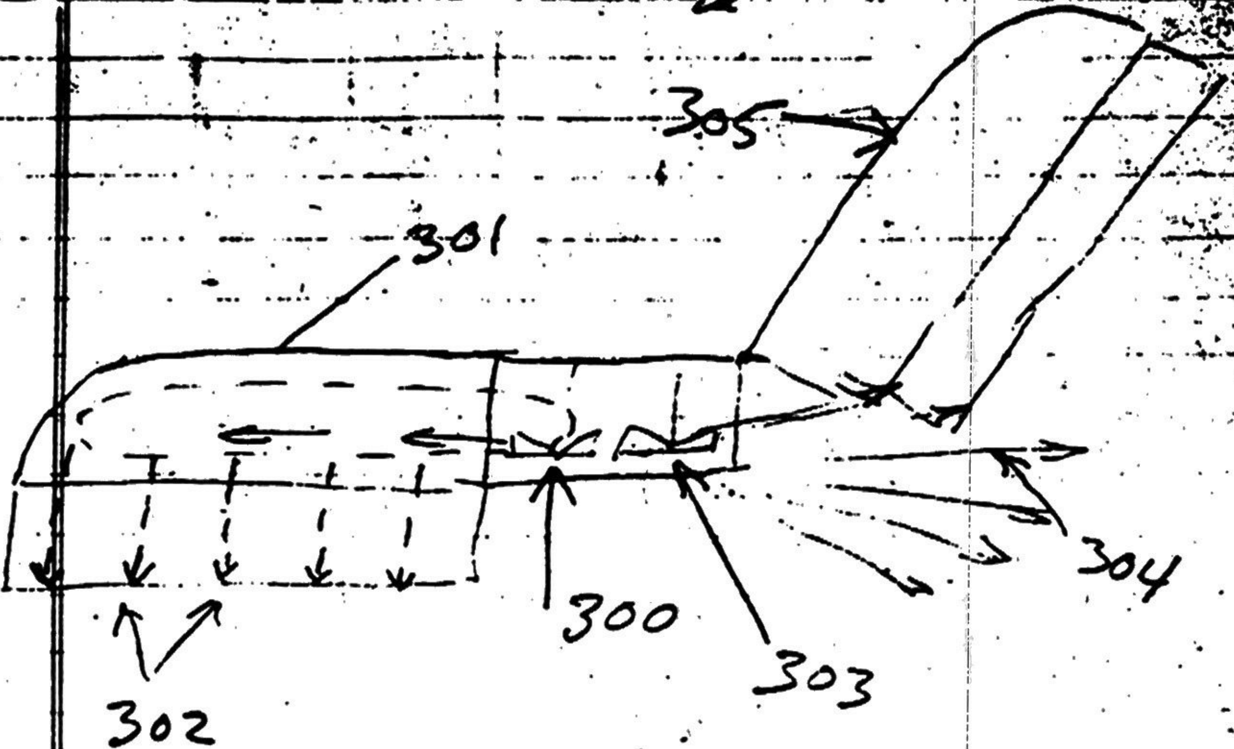
PSI-84918



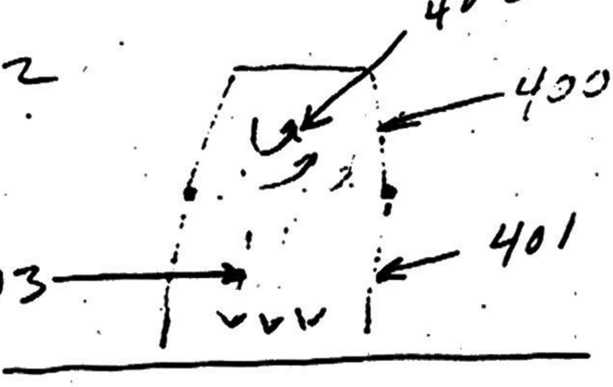
FM 2



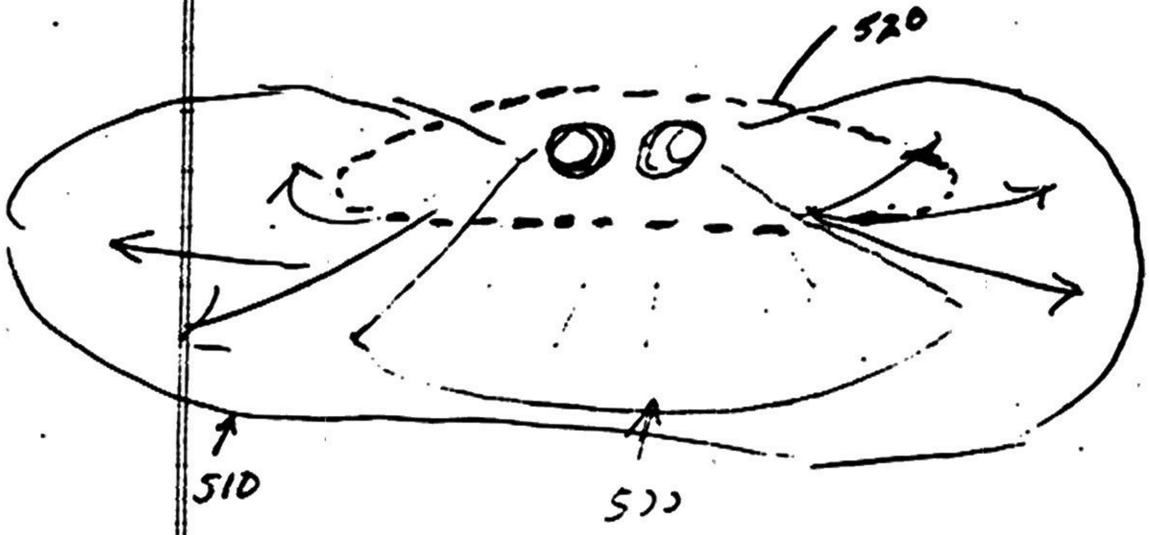
IX F



F:a 2



Pt G
2



- SELECTIVE SPREADING SPEEDS
- TWIN "TILTABLE" SPINNERS
- UNIVERSAL INSTALLATION
- UNITIZED WELDED SELF-SUPPORTING SUBFRAME

SPREADS ALL MATERIALS—FINEST TO COARSEST

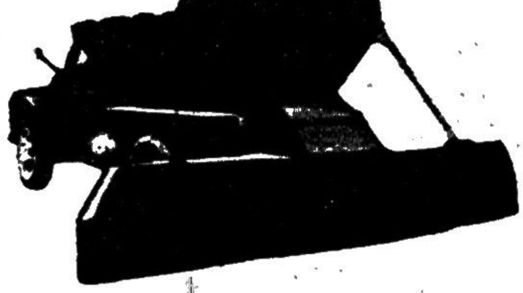
Three selective speeds at the "flip of the wrist"! Engineered and built by Anthony Co. for this job, the transmission has heavy-duty truck-type gears, shafts and roller bearings. Never before such sturdiness and flexibility of control.

Box constructed of HIGH TENSILE STEEL—Lighter, stronger, abrasive, rust and corrosive resistant. Design gives "low loading height" and lower center of gravity for greater truck stability.

Conveyor system has fewer parts, all-steel construction, machine-cut gears equipped with roller and ball bearings in sealed dust-proof housings which make this spreader outlast them all.

Adjustable non-clogging material chute to "tiltable" spinners makes it possible to spread up to 40′ width, heavy or light without bare strips or ridge.

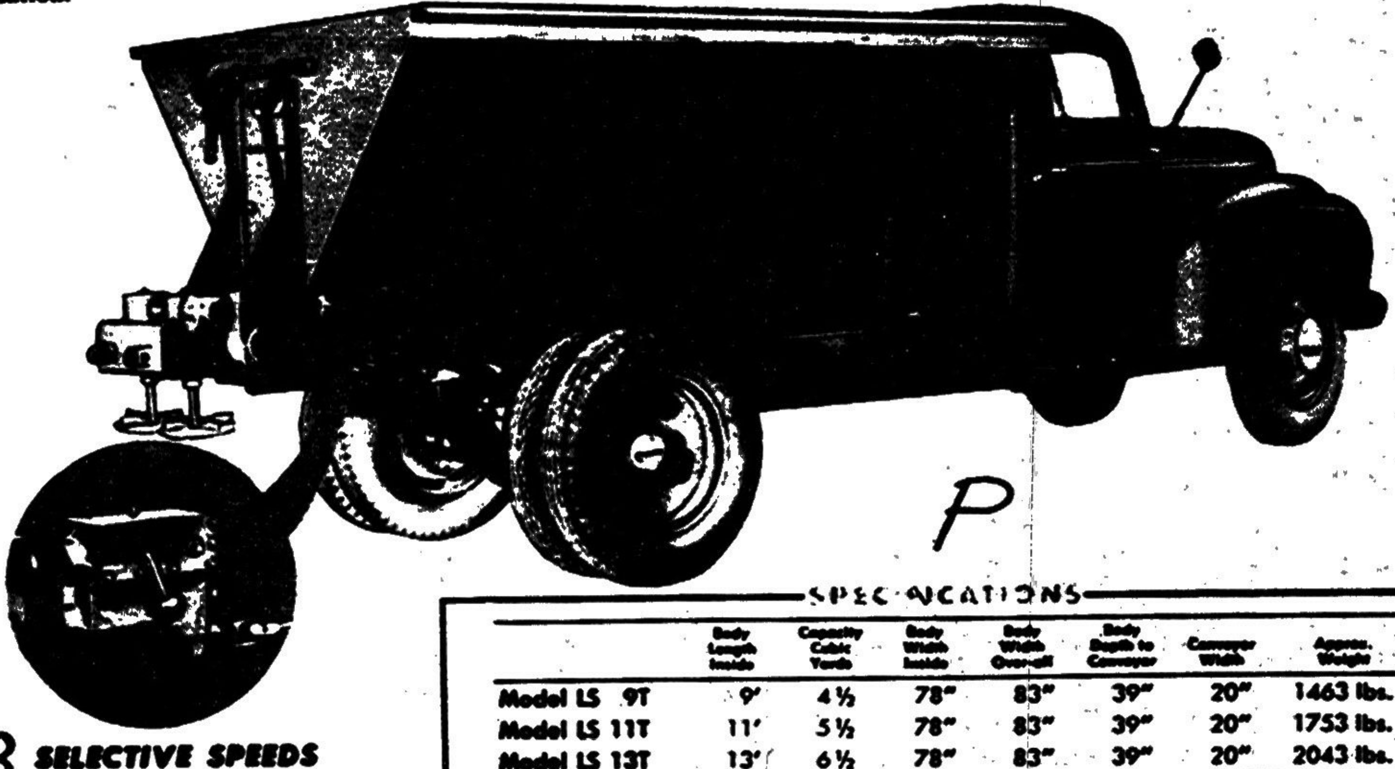
Over 33 years of automotive equipment manufacturing experience goes in all Anthony spreaders and they are backed by a nationwide sales and service organization.



PULVERIZED MATERIAL" ATTACHMENT

(PATENTS PENDING)

A field-proven accessory for dustless, accurate spreading of all finely-ground materials such as rock phosphate, super-phosphate, hot lime, etc. Non-clogging, spreads 16½′ width. Folds up for travel on highway, or spreading coarse material.



3 SELECTIVE SPEEDS TRANSMISSION

P

SPECIFICATIONS

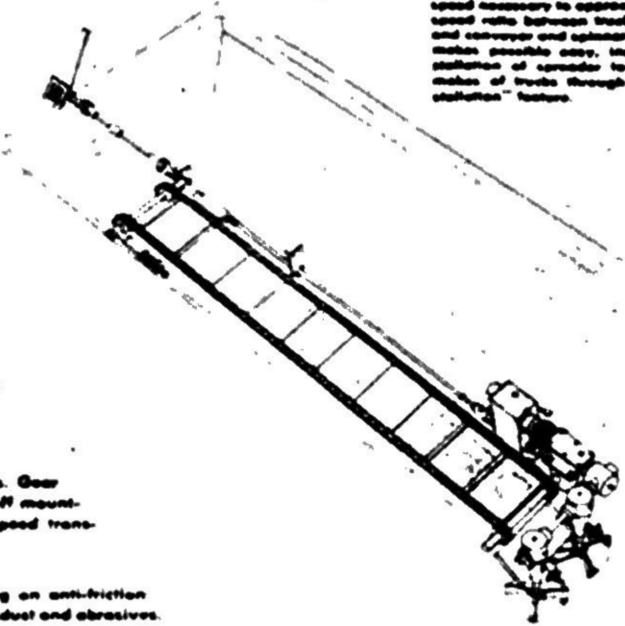
	Body Length Inside	Capacity Cubic Yards	Body Width Inside	Body Width Over-all	Body Depth to Conveyor	Conveyor Width	Approx. Weight
Model LS 9T	9′	4½	78″	83″	39″	20″	1463 lbs.
Model LS 11T	11′	5½	78″	83″	39″	20″	1753 lbs.
Model LS 13T	13′	6½	78″	83″	39″	20″	2043 lbs.

(Specifications subject to change without notice)

Farmers prefer ANTHONY quality spreading! You can earn more money, get more jobs through the "CUSTOM" job of spreading ANTHONY Spreaders do.

Just check these features . . .

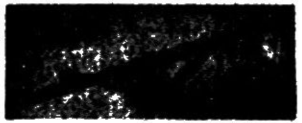
1. Precision, long-lived needle bearing power take-off (furnished at ,no extra cost).
2. Universal Joints—heavy duty, needle bearing, dustproof type.
3. Sliding type universal joint compensates for flexing of truck over uneven ground.
4. Automatic conveyor chain tension adjustors keep chain properly adjusted under all loads
5. Ball bearing pillow blocks support drive shaft
6. Conveyor flights riveted to chain gives greater flexibility to conveyor assembly for heavy duty performance
7. Hopper extends over top of chain links, reducing drag.
8. Sub-structure of all welded unit construction with bolted hopper box bolted on. This facilitates installation and storage.
9. 20" conveyor.
10. Simple, trouble-free metering door.
11. Heavy duty, precision built gear reduction equipped with ball and roller bearings. Gear reduction assembly mounts on right hand side only. Right and left hand power take-off mountings, crankshaft and anti-crankshaft rotations accomplished through "selective 3 speed transmission."
12. Special dustproof vents in all gear cases.
13. Mitre gear housings enclose heat treated, alloy steel machine cut gears, running on anti-friction roller bearings. Cases are designed to maintain constant oil level and are sealed against dust and abrasives.
14. Simple, efficient adjustment for "tilting" spinners add greater control for more efficient spreading of all materials.
15. Spinner blades are equipped with replaceable, hardened, abrasive-resisting steel plates.
16. Spinner shaft support bearings are placed close to spinners to eliminate vibration and wobble.
17. Adjustable chute. Divides material equally to both spinners. Non-clogging.



extra) is especially designed to make
able easy and quick selection of spr
speed necessary to approximate corr
speed ratio between truck ground s
and conveyor and spinners speed. D
makes possible easy, inexpensive i
stallation of spreader to new or o
makes of trucks through "universa
stallation" feature.

The Spreader BUILT to Spread ALL Materials!

Baughman
Precision Built
CONVEYORS



Model Q Screw Conveyor. Loads, unloads or conveys all material that rolls or bounces freely [illegible], from horizontal to 60 degrees. Portable, well balanced, easily raised or lowered. Up to 30-foot lengths in 8 or 10 foot multiples. Stationary models up to 100-foot lengths. Electric or gasoline drive.

Model 230 Portable Belt Conveyor is made of standard sections. Built in mass production to any length up to 70 feet portable, and 150 feet stationary. Built to any width and depth to fit your problem.

Model 175 Belt and Bucket Elevator for elevating, loading, unloading and storage of fertilizer, grain, coal, sand, etc. [illegible]

WE MAKE MANY OTHER TYPES OF CONVEYORS. WRITE FOR INFORMATION.

Sensational!
New Model 235 Fertilizer Sprayer Attachment for Baughman Model "K", "K-2" and "K-3" Bodies

297.68 plus freight
and mounted [illegible]

freight
[illegible] 13.00

Folds easily and safely to less than 8 feet for highway travel.

Sec. 34.66 P. L. & R.

IT'S BAUGHMAN!
IN EVERY DIRECTION • FOR EVERY JOB

"CONTROLLED DIRECTION" FEATURE ASSURES MINIMUM BLOW!

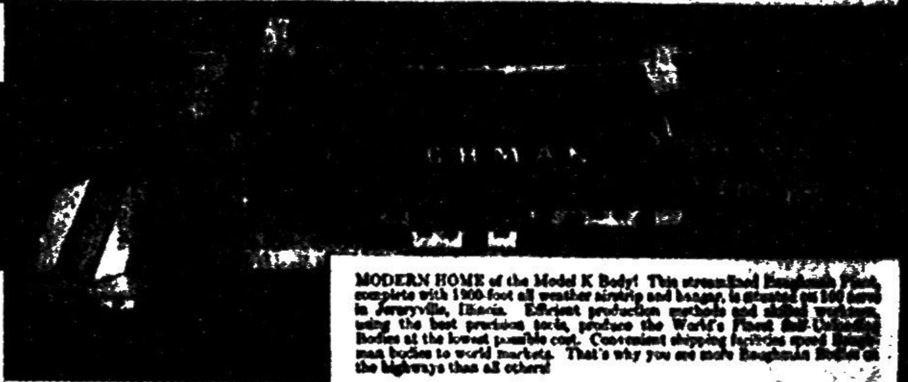
This revolutionary new attachment replaces wasteful "throw it in the air" methods now in use. The Model 235 prevents wind and air from getting to the material being thrown by the distributor, confines the usual air-blast created by the whirling distributor and directs it through a tapered fan-shaped "direction controlling" cover thereby spraying the material outward and downward to the ground. Limestone can be sprayed approximately 20 feet, and ordinary fertilizer — such as phosphate—about 20 feet.

Built of 12 gauge alloy steel with heavy reinforced hinges. Weighs approximately 250 pounds. 18 feet long. Heavy waterproofed reinforced canvas and rubber curtain gives long life. Fully Patented.

Folds easily and safely to less than 8 feet for highway travel. Opens quickly to an attractive low position on the body, yet cannot drag off. Has heavy shoe on front end of machine which merely lifts the ends should it touch the ground.

Px 2

Only the exceptional strength of heavy materials with sound construction methods can withstand a load like this. Notice that no anchor bracing or cross-arm rods are used, also how close to the ground car delivery is located.



MODERN HOME of the Model K Body! This streamlined Baughman Plant, complete with 1900-foot all weather airstrip and hangar, is situated on 100 acres in Jerseyville, Illinois. Efficient production methods and skilled workmen, using the best precision tools, produce the World's Finest Self-Unloading Bodies at the lowest possible cost. Convenient shipping facilities speed Baughman bodies to world markets. That's why you see more Baughman Bodies on the highways than all others!

MODEL O-2 SPREADER FOR COMMERCIAL OPERATORS

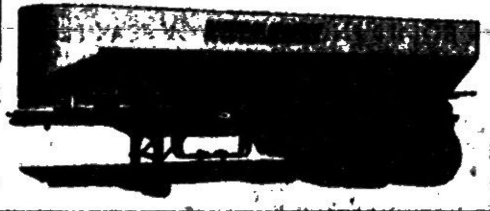
Fast, efficient, economical way to spread rock phosphate, dry powdered lime and many other fertilizing materials. Spreads 16½ foot widths. Material evenly distributed through use of augers carrying it to ends of the tubes. Folds to under 8 feet for highway travel.

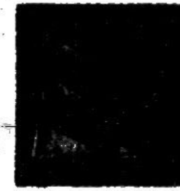
Model K "Tree Special" Body. Narrow bottom, 8-inch drag chain.

Model K Transport Body. [illegible]

FROM SMALL SPECIAL BODIES TO BIG TRANSPORTS

You Get a Baughman "Hi-Speed" Body for most every need! Large self-unloading transports for handling grain, coal, cement, super phosphate and many other materials. And, by contrast, the low, compact Model K body for spreading fertilizer in orange groves, orchards and other areas where there are low-hanging branches. Remember, whatever your handling problem, you'll likely find a Baughman body to fit it to complete satisfaction.





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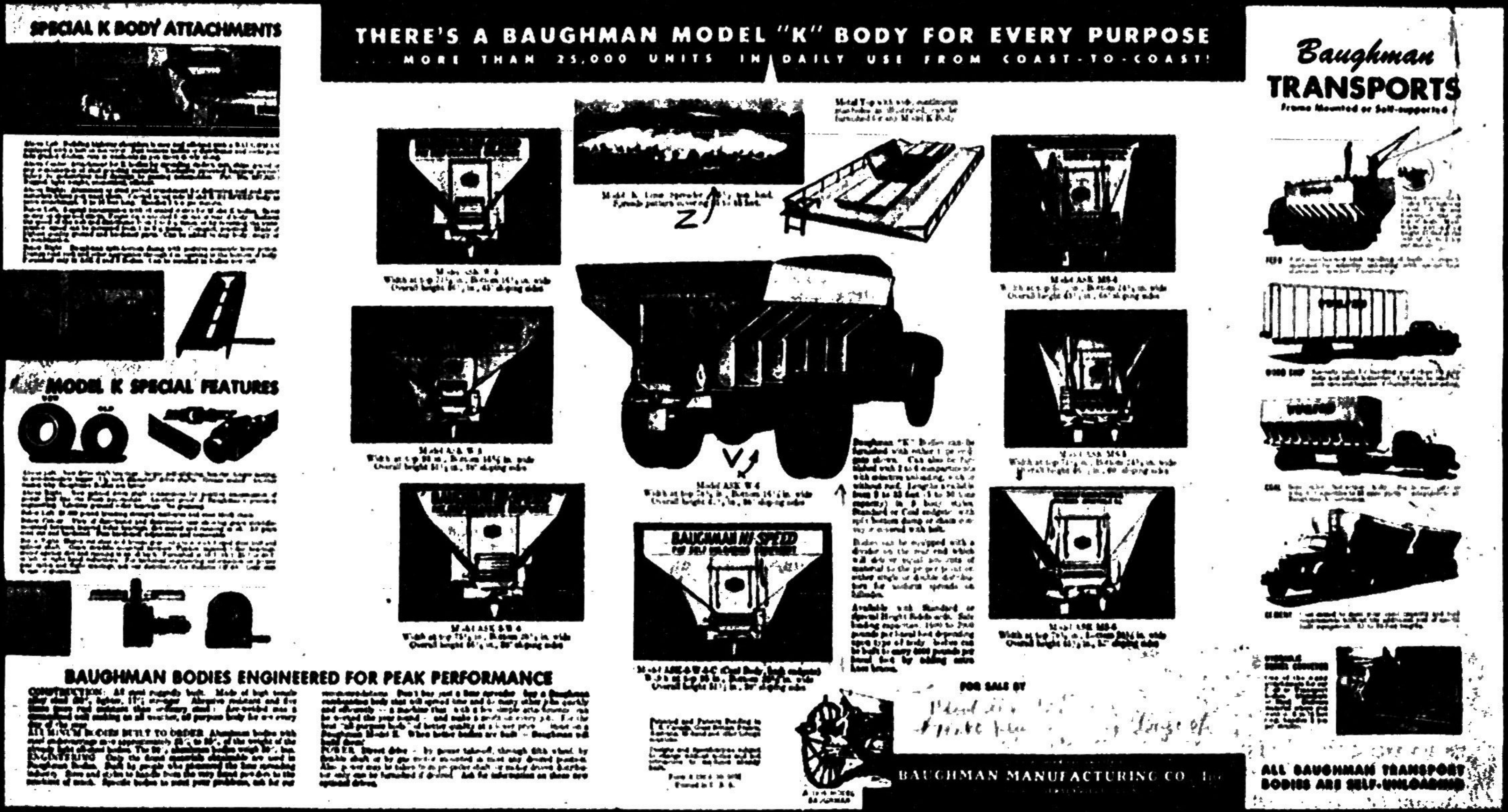

SPECIAL K BODY ATTACHMENTS

[illegible]

MODEL K SPECIAL FEATURES

[illegible]

BAUGHMAN BODIES ENGINEERED FOR PEAK PERFORMANCE

CONSTRUCTION: All most ruggedly built. Made of high tensile alloy steel [illegible] lighter, [illegible] stronger. Abrasive resistant and [illegible] times more rust resistant than ordinary steel. [illegible]

ALUMINUM BODIES BUILT TO ORDER. Aluminum bodies with [illegible]

ENGINEERING. Only the finest materials obtainable are used in Baughman Bodies. Built by people who pioneered the lime spreading industry. [illegible]

[illegible] Don't buy just a lime spreader, buy a Baughman combination body that will spread lime and do many other jobs quickly and efficiently — a machine that with a few simple attachments can be worked the year round — and make a profit on every job. For the best "all purpose body" of better quality at a lower price — insist on a Baughman Model K. When better bodies are built — Baughman will build them.

POWER. Direct drive — by power takeoff, through fifth wheel, by flexible shaft or by gas engine mounted in most any desired position. [illegible] Ask for information on these optional drives.

THERE'S A BAUGHMAN MODEL "K" BODY FOR EVERY PURPOSE

... MORE THAN 25,000 UNITS IN DAILY USE FROM COAST-TO-COAST!

Metal Top with wide continuous manholes as illustrated, can be furnished for any Model K Body.

Model K Lime Spreader [illegible] spreads pattern [illegible] to 40 feet.

Z

Model ASK W-4
Width at top 71½ in., Bottom 14½ in. wide
Overall height [illegible] in., 45° sloping sides

Model ASK W-4
Width at top [illegible]

Model ASK W-4
Width at top [illegible] in., Bottom [illegible] in. wide
Overall height [illegible] in., [illegible] sloping sides

V

Model ASK W-4
Width at top [illegible] in., Bottom [illegible] in. wide
Overall height [illegible] in., [illegible] sloping sides

Model ASK-4-W-4-C (Coal Body, high endgate)
Width at top [illegible] in., Bottom [illegible] in. wide
Overall height [illegible] in., [illegible] sloping sides

Model ASK MS-4
Width at top [illegible] in., Bottom [illegible] in. wide
Overall height [illegible] in., [illegible] sloping sides

Model ASK MS-4
Width at top [illegible] in., Bottom [illegible] in. wide
Overall height [illegible] in., [illegible] sloping sides

Model ASK MS-4
Width at top [illegible] in., Bottom [illegible] in. wide
Overall height [illegible] in., [illegible] sloping sides

Baughman "K" Bodies can be furnished with either 1 piece or 2 gate shown. Can also be furnished with 2 to 4 compartments with selective unloading, with or without roof. Lengths available from 8 to 22 feet (3 to 30 tons capacity) in 3 body styles, Standard or Coal endgate with split bottom dump or chain conveyor covered with belt.

Bodies can be equipped with a divider on the rear end which will deliver equal amounts of material to the proper point on either single or double distributors for uniform spreads on hillsides.

Available with Standard or Special Height Bodies with. Safe loading capacities 1500 to 2500 pounds per lineal foot depending upon type of body. Bodies can be built to carry 4000 pounds per lineal foot by adding extra knee braces.

Patented and Patents Pending in U.S., Canada, Great Britain, France, Australia, Holland and other foreign countries.

Designs and Specifications subject to change without notice and without obligation to equipment already built.

Form [illegible]
Printed in U.S.A.

FOR SALE BY

[illegible]

BAUGHMAN MANUFACTURING CO., Inc.

Baughman TRANSPORTS

Frame Mounted or Self-supported

FEED [illegible]

WOOD CHIP [illegible]

COAL [illegible]

CEMENT [illegible]

[illegible]

ALL BAUGHMAN TRANSPORT BODIES ARE SELF-UNLOADING

TRANSCRIPT OF RECORD DURING TRIAL HAD MARCH 21, AND MARCH 22, 1955

(18) **Aubrey L. Jones**

the plaintiff, was called as a witness and, having been first duly sworn, took the stand, was examined and testified as follows:

DIRECT EXAMINATION

By Mr. Kinney:

Q Will you please state your name?

A Aubrey Jones.

Q Are you the same Aubrey Jones who is the inventor in Patent Application Serial No. 951145 in the United States Patent Office on May 24, 1949?

A Yes, sir, I am.

* * *

(19) Q Mr. Jones, will you very briefly, and speak as loud as you can and directly to the Judge so his Honor can hear you, state the circumstances leading up to your filing this patent application?

A Well, since 1945, I have been in the trucking business and handling limestone fertilizer for the farmers in my community.

Particularly, I used a limestone spreader to spread this limestone, but down through the years as the years came on, it was being requested to spread this fine phosphate material, fine material spread, which I would put in my limestone spreader and take out to the field and spread for the farmer; which, when it hit the propellers it would just take off in the air which was $22 a ton spread on.

An automobile may be sitting a half mile off, you could go by the automobile and wipe the dust off, of this material which I was spreading. None of it would settle on the ground I was spreading it on. So that put a stop for me spreading (20) that to the farmers. The limestone I spread was $3 a ton, which would go on with their limestone spreader O.K.

So I knowed I was going to have to do something, so I wrote to several companies that manufactured limestone spreaders and told them the situation, and I would get replies back, they didn't have nothing on the market that would spread fine material that was to be spread.

So as I worked through the years on spreading this limestone and trying to spread the phosphate which I would have no results, because they would not allow me to spread it blown like that.

In the year, July, 1948, I built an attachment which would go out and do the job. I went out and spread on the same farm, I spread before, and it laid on neatly.

Q Would you explain what you did then? You say you built an attachment. Explain to his Honor what type of an attachment you built and what you did with that attachment.

A The attachment had a center section in it; two wings; hood-like; and I would attach it to the back of this lime spreader — fasten it on. That didn't remove nothing off the lime spreader. It was attached to the lime spreader, and I would run this fine material through that, go down through the field, lay it on there evenly and lay it on the ground in the field. Lay it right down just like it was painted on; where the farmers were getting results of the (21) material.

Then I went to a blacksmith there in my community and had him to build one for me. And he built several hundreds of them, as I know, for farmers, and truckers, as they seen the results from my first one — what it done, and they built up several hundreds of them.

Meanwhile, I licensed to the Anthony Company which built the limestone spreaders which they built up in the hundreds of them, because after it proved to be satisfactory in the field, and proved satisfaction to spread the fine material, it went over good for the spreading of the fine material. And as the Anthony Company quit making limestone spreaders, well, they didn't go ahead and make the phosphate spreader, but as I drive over the country there is thousands after thousands of them over the country. That is all they are using today—this attachment that I built. And as today, I know of six or eight companies that is building them, exactly the same kind I built.

* * *

(22) Q To now rephrase the question, was your device similar to what I have just indicated by the penciled initial A part of Plaintiff's Exhibit 1?

A Yes, it was.

MR. KINNEY: May this be in evidence, your Honor?

(23) THE COURT: It will be admitted.

* * *

Q Mr. Jones, when a Jones attachment is secured to a conventional limestone spreader, is it possible to spread granular material with that device?

MR. MOORE: I object, your Honor. There is no definition here as to what a Jones attachment is.

THE COURT: I understood it was the —

MR. KINNEY: If your Honor please, I think this photograph clearly shows what it is.

THE COURT: I will overrule the objection.

(At the request of counsel the reporter read the pending question.)

THE WITNESS: Yes, it is.

By Mr. Kinney:

Q When that is done, will you state the position of the shroud of your device, and in answering that question, will you please refer to the photographs appearing on Plaintiff's Exhibit 1. If you wish to do any marking, you may do so by (24) indicating in pencil starting with the letter B.

A Just mark?

THE COURT: Just explain it — I think I understand.

THE WITNESS: You take these wings out here — this hood part here — fold it clear up out of the road, which leaves these propellers open to spread the granulated material.

By Mr. Kinney:

Q Is that shown in the photograph which I am now adding the pencil initial B to?

A Yes.

Q Is it also shown in the photograph to which I am adding the pencil notation C?

A Yes, it is.

Q Mr. Jones, will you state whether or not there were motion pictures ever taken of your device?

A Yes.

Q Were you in those motion pictures?

A Yes, I was.

MR. KINNEY: If your Honor please, I don't want to encumber the record by getting too technical. We would like to show to the Court and Mr. Moore of the Patent Office, a short film which shows Mr. Jones riding on one of his own constructions, spreading phosphate from a conventional limestone spreader provided with one of his attachments.

MR. MOORE: We don't intend to become technical about (25) any of these cases. We are agreeable to the showing of the picture.

(The following testimony was given during the showing of the motion picture film.)

By Mr. Kinney:

Q Mr. Jones, will you please state in a loud voice exactly what is occurring in this photograph?

A I am spreading fine material — phosphate — upon the ground there, which is corn rows which you can see the rows plainly — stubbles there. It is spreading it up on the ground very neatly. The dust you see there is off the curtains on the bottom of my attachment which hits the stalks and stubble there which raises the dust, after it is applied to the ground.

You see the curtains sloping across the stalks. It disturbs the phosphate on the ground and raises a low dust there.

Q Mr. Jones, speaking from your own personal knowledge, and experience, has it ever been possible to obtain a similar type of ground pattern, using a pulverulent such as phosphates in a conventional limestone spreader?

A No.

Q Could you indicate to the Court approximately the amount of limestone being spread in this motion picture, per acre?

(26) A It is phosphate that is being spread.

Q Phosphate?

A One thousand pounds to the acre.

Q Will you state, if you know, what we are seeing? The dust, what is that?

A That is the dust that is raised because the curtains are hitting on the stalks and stubble after it hits the ground.

Q Mr. Jones, is that a typical distribution pattern such as would be obtained when using one of your devices with a limestone spreader?

A No, you have no pattern at all — it would be flowing off on the air.

Q I believe you misunderstood me. I said, is that not typical when your type of device is used?

A Yes.

MR. KINNEY: Your Honor, you see the side wings raised.

By Mr. Kinney:

Q Is that you in that picture, Mr. Jones?

A Yes.

Q Which one?

A The one in the truck.

Q The one in the truck?

A Yes.

MR. KINNEY: Your Honor, you can see the same — this is just the same farm, again.

(27) THE COURT: What material is the shroud made from? You refer to it as a shroud.

MR. KINNEY: Yes. The upper portion of the shroud is made from metal and the curtain is of a canvas or rubber material. In the patent drawings—

THE COURT: Your Figure 3 in this brief looks to me as though it is all metal, but apparently it is not.

MR. KINNEY: No, it is not, your Honor. If I might direct your attention, please, to Plaintiff's exhibit 1, particularly photograph C thereof, you will note there that the flexible material has been rolled up when the shrouds have been in an elevated position.

By Mr. Kinney:

Q Will you now briefly state whether the association of your attachment to the conventional limestone spreader effects any alteration of the mechanical operating characteristics of the impellers?

A No, it don't.

Q Do you know what occurs inside of the chamber defined by your attachment, when it is in the lowered operative position?

A Yes.

Q Will you state what occurs?

A The fine material comes out the spreader on to these fans and it whirls it up in there — the airborne condition, (28) until it gets so heavy and it drops. The propellers in there throws up so much airborne material in there from them propellers they drop as it goes along.

Q Mr. Jones, will you state for the record the difference, if any, between phosphate and super-phosphate?

A Yes. The phosphate is very fine. It is as fine as talcum powder. Almost the same as talcum powder. The super-phosphate is treated with acid of some kind which makes it a little coarser material.

(End of motion picture.)

* * *

Q I hand you what has been marked for identification, Plaintiff's Exhibit No. 2, and ask you to state what that is.

A Phosphate.

Q And will you state what Plaintiff's Exhibit No. 3, for identification is?

A Super-phosphate.

(29) Q Will you state where Plaintiff's Exhibits 2 and 3 originated?

A You mean what they are made out of?

Q No, how did I get them?

A I brought them from my own plant, from my home town.

THE COURT: Where is your home town?

THE WITNESS: Illinois, Shelbyville. This material is shipped in to my place there.

MR. KINNEY: I apologize your Honor. This is a fine time to find out where he is from.

By Mr. Kinney:

Q Do you state under oath and to the Court that the material, Plaintiff's Exhibit 2, is typically commercial available phosphate such as is spread on to the fields?

A You mean is that the same phosphate that I spread on the field?

Q Yes.

A Yes.

Q And is that what, if I went to a supplier of phosphate and wanted five ton of phosphate, is that the type of material I would get?

A Yes.

Q Is this the commercial material?

A Yes.

Q Is Plaintiff's Exhibit No. 3, is that the typically (30) commercial available super-phosphate?

A Yes, it is.

* * *

Q That we might have the record complete on these materials, I ask you whether or not what has been marked as Plaintiff's Exhibit 4 for identification — I shall ask you to state what that is.

A That is limestone.

Q Mr. Jones, is that a typical sample of commercially available limestone, as that term is used?

A Yes.

Q What is meant by the term lime — l-i-m-e?

A Well, that is an acid rock that is ground up into that form to spread upon the field.

Q Are the terms lime and limestone interchangably used to refer to the same product?

A Yes, they are.

(31) MR. KINNEY: That is all.

CROSS EXAMINATION

By Mr. Moore:

Q Mr. Jones, you know what blow-away is, don't you?

A Yes.

Q The pictures that were shown to his Honor showed blow-away in the use of your device, isn't that true?

A Yes.

Q Your device diminished the blow-away, but it did not eliminate blow-away?

A Well, the blow-away came after the material was on the ground, and this canvas hit the stalks and stubble. It would just be the same as if you were walking through a dusty field when you kick it up with your feet, it would raise the dust up.

Q But there was blow-away in the use of your device?

A Yes, sir, there was blow-away from the disturbance of the curtains there hitting the stubble.

Q Now, you say that Plaintiff's Exhibit No. 4 is limestone?

A Yes, it is.

Q Isn't there limestone of smaller particles than that in use?

A No, there isn't.

Q Haven't these limestone spreaders, such as the one (32) to which you attached your device, been used to spread lime as distinguished from limestone?

A Yes.

Q And lime, as distinguished from limestone, is very much lighter and smaller in particles, isn't that true?

A Limestone is just like that.

(Witness indicates Plaintiff's Exhibit No. 4 for identification.)

Q I am speaking of agricultural lime — it does have a small particle size, smaller than is shown by these particles in this bottle?

A I don't believe limestone — not that I have seen.

THE COURT: He says lime, not limestone.

THE WITNESS: You get this white lime like they put in plaster and stuff like that, but that is not agricultural use — for agricultural use, there is no finer lime.

By Mr. Moore:

Q Are you familiar with dolomite?

A Yes, I have handled dolomite.

Q Dolomite is a lime?

A Yes.

Q Isn't that very small in particle size, smaller than that bottle?

A You will have some small in it, but it will still have some granulated in it.

(33) Q Smaller or larger than those in this bottle?

A They might be a little smaller.

MR. MOORE: No further questions.

REDIRECT EXAMINATION

By Mr. Kinney:

Q Mr. Jones, when a conventional limestone spreader is utilized for spreading pulverulent material such as phosphate or super-phosphate, without a Jones attachment, is any ground pattern established as the truck passes?

A No, there is not a bit of ground pattern established.

Q What occurs to the material that is put on to the rotating impellers, if it be highly pulverulent, using a conventional limestone spreader without your attachment?

A It would hit them spinners and just take off in mid-air like that. Just like you are going down a dusty road and your dust will pick up and maybe land in the road or leaves or car or some place. Just take off and blow.

Q Would that be referred to as blow-away?

A I would consider it all blow-away.

Q What concentration of it would be possible to get on to an acre using a conventional limestone spreader without your attachment?

A You couldn't get none on it.

MR. KINNEY: That is all.

THE COURT: You mean you wouldn't get any on it, at all?

(34) THE WITNESS: Using just a plain limestone spreader, no, sir.

THE COURT: You mean it would all blow away?

THE WITNESS: It would all blow away. You hit that fan — well, you see in the pictures, your fan sets up off the ground, and when it hits the fan it would just take off.

THE COURT: It would land some place.

THE WITNESS: It would land some place — maybe on somebody else's farm.

* * *

Fred Hardy

was called as a witness by counsel for the Plaintiff and, having been first duly sworn, took the stand, was examined and testified as follows:

DIRECT EXAMINATION

By Mr. Kinney:

Q Will you please state your name, your address, and your occupation?

A My name is Fred E. Hardy. I live in Hamilton, Ohio. I am employed as a City Engineer and building Commissioner of the City of Hamilton.

Q Will you please indicate what experience you have had (35) if any, that would enable you to read and understand drawings — blueprints and patent drawings.

A I am a registered professional engineer in Ohio and Illinois.

I am a graduate civil engineer, graduating from Tri-State College of Engineers in 1928, and I have been in the engineering field since that time. Not always in civil engineering work.

In 1933, I became Chief Engineer of the Sta-Rite Ginnie Lou, Inc., Hairpin Company, in Shelbyville, Illinois. They manufactured hairpins and bobbypins out of wire on automatic machinery, requiring quite a bit of mechanical skill on my part as chief engineer, designing the tools, jigs, and fixtures to manufacture them.

I was in charge of the tool room, industrial engineering division, and the research and development and the maintenance department of that firm.

And in June, 1946, I opened a consulting engineering office of my own in Shelbyville for the general practice of civil and mechanical engineering; specializing mostly in industrial building construction. And I maintained that office until 1952 when I took my present position with the City of Hamliton. Of course, in the City of Hamilton, being their City Engineer, I naturally dealt in all kinds of improvements, checking plans of buildings to be built, and those that are (36) built.

Q Do you know Aubrey L. Jones, plaintiff in this action?

A Yes.

Q Will you relate the circumstances under which you first met Mr. Jones?

A In the fall of 1953, at the death of my wife's father, she inherited a farm one mile south and two miles east of Stewardson, Illinois. And as her husband, I operate that farm. We still have it, today. And in that part of Illinios, it is called thin ground. It has been farmed over and over, and you have to put plant food into the ground, and naturally using limestone, I have purchased limestone to be spread on that farm from Aubrey L. Jones.

And as it had been in the past, when we needed phosphate, they drilled it with the seed, but that wasn't in sufficient quantity to produce the crops that the State Agricultural Societies and the Farm Bureau said could be produced, and they advocated all farmers to use phosphate and potash in quantities; 1,000 pounds or 2,000 pounds to the acre, and so forth.

Well, in asking Jones to spread phosphate on our farm, after you have done it once and you saw what happened with the ordinary conventional limestone spreader using pulverulent material such as bulk phosphate, you insisted that something else be done. And the main thing we tried was to get him to (37) spread it at night or early in the morning when there wouldn't be any winds that would augment or affect this blow-away, whereby the farmer next to you would get the benefit, because you wanted to get so many pounds per acre; and you weren't getting it with the conventional limestone spreader.

Then, in 1948 — the fall of '47 — I became better acquainted with Mr. Jones, due to the fact that my office was retained by the Farm Bureau in Shelbyville to construct and supervise the installation of bulk limestone, phosphate, potash — handling, trucking, and weighing facilities — and Mr. Jones had been appointed manager of that installation for the Farm Bureau, and I became more acquainted with what he was trying to do to get around this blow-away, so that when he spread phosphate he could spread phosphate with the ordinary spreader.

Q Might I interrupt here, to inquire when Mr. Jones spread phosphate on to your wife's farm using, I believe you testified, a conventional limestone spreader, did you so testify?

A I think I called it a conventional limestone spreader.

Q First, I should like you to indicate whether or not by the term "conventional limestone spreader" you were referring to the Anthony device as in photograph A?

A Yes.

THE COURT: Has that been introduced in evidence, or are (38) you planning to offer it in evidence?

MR. KINNEY: If I might take a minute of the Court's time, now, I think I can find it.

THE COURT: No, I just wanted to be sure it is in evidence.

MR. MOORE: May I make a suggestion? I believe it is included in the depositions that were taken in Illinois.

MR. KINNEY: It is, Mr. Moore, but the deposition — it is an exhibit in the deposition, indicated by the letter P.

By Mr. Kinney:

Q Will you indicate what occurred, exactly what occurred when phosphate was spread on your wife's farm by Jones, using the conventional limestone spreader?

A You could not secure an even distribution upon the ground of that phosphate. It would blow away. It is light material, and if you wanted so many pounds per acre — well, you couldn't get it, and it is expensive material.

Q To what extent did that blow-away occur?

A About 95 per cent of the material would go someplace else. And we quit purchasing the phosphate to be spread on the ground by the conventional limestone spreader — we just couldn't get the results.

Q Mr. Hardy, a few moments ago you were in the Courtroom while we exhibited to the Court a motion picture of a phosphate spreading operation, using the attachment that we are concerned (39) with here today.

Will you indicate now, to the Court, whether or not any pattern was obtained on your wife's farm when phosphate was spread thereon, using a conventional limestone spreader?

A Mr. Jones, spreading phosphate — I think it was 8100 pounds on my wife's farm — it was the second use of that spreader attachment, and we got a very even pattern. We were completely satisfied with the pattern on the ground.

THE COURT: I don't think he understood the question.

By Mr. Kinney:

Q In other words, I am asking you, with a conventional limestone spreader, not shown with the attachment, Mr. Hardy, —

A Oh, we didn't secure any ground pattern.

Q You are stating under oath that you did not obtain any ground pattern? Where did the material go, Mr. Hardy?

A It blew away.

Q Have you ever had any experience in Illinois with this blowing away of the phosphate?

A Yes. At least on one occasion. And more during my travels when they had been spreading this phosphate. I had been driving along the highway, I would have to stop while the clouds of phosphate dust blew away. It was hazardous; you couldn't see.

Q Did Mr. Jones ever spread phosphate on your wife's farm, using an attachment on a conventional limestone spreader?

(40) A Yes, many times.

Q What results were obtained?

A We got fully satisfactory coverage of the ground.

Q With respect, now, to the motion picture we saw a few moments ago, will you indicate how the ground pattern attained on your wife's farm, using a conventional limestone spreader provided with the Jones attachment, compared with the spreader that we exhibited on the motion picture screen a few moments ago?

A More or less, exactly like that.

Q Would you say that is a typical spread pattern obtainable when a Jones attachment is used with a conventional limestone spreader?

A Yes, it is.

Q I shall now ask you, whether or not you have studied and are familiar with the disclosures of the British patent to Johnson, No. 584809?

A Yes. And I have had a model made of that.

* * *

Q Referring now to the distribution on your wife's farm, using the conventional limestone spreader plus the Jones attachment on pulverulent materials — phosphate — did blow-away (41) occur?

A No. Not as I term blow-away.

Q Will you define, please, what you mean by blow-away?

A I term blow-away where you practically lose 80 per cent or 90 per cent — where 80 or 90 per cent is blown off into the air.

Q And where would that finally land, Mr. Hardy?

A Wherever it hit, or wherever the air currents would take it.

Q Such as in tree tops and the like?

A That is right.

Q When the phosphate was being applied with a conventional limestone spreader on your wife's farm, provided with a Jones attachment, did you have a similar clouding condition around the lower periphery of the attachment, such as was shown in the motion picture a few moments ago?

A Yes, whenever we had ground conditions like that, and stubble — corn stubble particularly — we would have that.

Q What would occur, Mr. Hardy, with a field to be gone over with the same equipment that we saw in the motion picture, but where the field did not have stubble?

A Well, you wouldn't get quite the dust conditions you got in that picture. You take on pasture ground, you wouldn't have that, because you wouldn't get that flipping of the canvas.

(42) Q Would you refer to that cloudy condition as blow-away?

A I wouldn't.

Q You say you would or would not?

A I wouldn't refer to it as blow-away.

MR. KINNEY: Your Honor, I am sorry, I don't know what he said.

THE COURT: Would you repeat your answer? Counsel is having a difficult time understanding you.

THE WITNESS: I would not — it is not what I would term as blow-away.

MR. KINNEY: Thank you, your Honor.

By Mr. Kinney:

Q I believe you stated that you are familiar with the British patent to Johnson?

A Yes.

* * *

Q I hand you, sir, what has been marked for identification (43) as Plaintiff's Exhibit No. 5, and Plaintiff's Exhibit No. 6, and ask you to state what they are.

A They are models that I had made representing the British patent. They are not a complete representation, because in a truck bed we don't have the conveying means to bring the bulk material back to the discharge port which is right down at the bottom here.

Q Will you please identify what you have?

A This is Plaintiff's Exhibit No. 6. This is the distributing unit of the British patent. And this is similar, but we do not have the large centrifugal fans that they call for right here. We have paddle wheels for the impact members, that will rotate when the machine operates, throwing the material one way, and the material the other way in the shrouds.

We have the shrouds. We don't have the big centrifugal fans that they call for. We don't have the air holes in the side member here in the center section through which the air is brought in by the fans into the centrifugal fan unit.

We don't have the housing over this, which is not essential. But what we are showing is essentially the British Johnson distributing unit.

Q Mr. Hardy, in your opinion, is the plaintiff's exhibit 6 a true and accurate representation of the impellers 33, 34 and 35, of the British patent?

MR. MOORE: I want to object to the question on two (44) grounds.

One, the test that is sought to be elicited would seem to be cumulative in nature.

Second, the witness hasn't been qualified as an expert on agricultural devices of this type.

Now, I think the first objection is a policy objection. As I understand the policy of this Court, it is to accept the one expert witness and one alone in these patent cases. There has been an expert witness, Mr. Duis, who testified by deposition in this case.

In fact, Mr. Hatala also purported to be an expert. So it is coming down now to the Court being asked to accept three experts in this case.

THE COURT: I think he may answer. It will be helpful to me. While I will read the depositions, it is a little bit more helpful for me to see the exhibits. I think he may answer.

MR. KINNEY: If Your Honor please, we are not endeavoring to go contrary to any rules. Actually, the testimony of Mr. Hardy will be different, and we are certain that it will enable you to more fully appreciate the operating characteristics of the device.

By Mr. Kinney:

Q Will you answer the question, please?

* * *

(45) THE WITNESS: I would say they are true representations completely. He calls for centrifugal fans, but these are a very true picture of what actually he has there in that they have paddles which he has on his centrifugal fans to use as impact members for distributing the material.

By Mr. Kinney:

Q Will you explain to the Court the purpose of Plaintiff's Exhibits 5 and 6?

A The idea is to show what happens when you use these impact members and use this Johnson device without an air stream to show what happens to various types of material and to show what the distribution is — what happens to the distribution of the material as it hits these impact members.

MR. KINNEY: If I might, your Honor, at this time briefly make a statement concerning the deposition of Mr. Duis.

It is there stated that in the Jones attachment, when it is in a lowered position, and as shown in Plaintiff's Exhibit — if your Honor please, might I have your permission to make this exhibit available. It has been stapled closed so we can't use it.

(46) THE COURT: Certainly.

MR. KINNEY: Plaintiff's Exhibits C and F of the depositions, taken in Illinois, wherein the theory of air distribution within the Jones device is illustrated in the sketch having the numerals on it, 200, 201, 203, wherein all of the air is circulated within the housing, and wherein, on Plaintiff's Exhibit F, the type of settling out has been indicated by the headed arrows 403 and by headed arrows 302.

Would the Court be so kind as to permit the witness to step over to the table on which we have a large black piece of cloth?

THE COURT: Certainly.

(The Court, the witness, counsel for the plaintiff and for the defendant, and the reporter, all went over to the counsel table for the demonstration.)

By Mr. Kinney:

Q Mr. Hardy, if you will please explain in words, using numbers, exactly what you are doing.

A I am going to attach plaintiff's exhibit No. 6 to Plaintiff's Exhibit No. 5. I will at this time use these screws to hold it in place. We have a motor mounted in the cab to operate these impact members in the center section.

Q Might we call the attention of Mr. Moore and his Honor to the fact that the impellers are being driven.

(47) Mr. Hardy, is it your — will you state whether or not the device which is now operating on the table, is a true and accurate representation of a device embodying the teachings of the Johnson patent, but without the use of the centrifugal fan?

A Yes.

Q Will you now, please, demonstrate the manner in which the operating exhibit will distribute a typical granular type of material?

A This is granular material, and I will have to push it back into the discharge port with this paper so it hits the impact members.

(Witness demonstrated the distribution of granular material on the black cloth on the table.)

Q Now, that is with the shroud down. I shall now ask you to again operate the same exhibit on the same material after the device has been pulled forward approximately five inches, in which the shrouds are being fully elevated by me.

I shall now ask that you operate the exhibit using superphosphate, plaintiff's exhibit 3, with the shrouds in a lowered condition.

MR. KINNEY: If your Honor, please, and for Mr. Moore's information, what happened, this material has lumps in it, and when they get in that little fan area, things stop. That is what happened then, I think.

(48) Will you now again operate the same model on superphosphate as before, but wherein the shrouds will be in an elevated position and to assist you, I shall elevate the shrouds.

(Witness demonstrated device as directed by counsel.)

By Mr. Kinney:

Q Will you now please operate the same device, using phosphate, Plaintiff's Exhibit 2, with the shrouds in a lowered condition?

(Witness demonstrated the exhibit as directed by counsel.)

Q Will you now operate the same exhibit, using the phosphate, Plaintiff's Exhibit 2, wherein the shrouds are fully elevated?

(Witness demonstrated the exhibit as directed by counsel.)

Q Now, will you please operate the exhibit on the finest of materials, which is talc, with the shrouds or wings in a fully lowered position?

(Witness demonstrated exhibit as directed by counsel.)

Q And will you now operate the same exhibit again on talc with the wings in a fully elevated position?

(Witness demonstrated exhibit as directed by counsel.)

MR. KINNEY: Might I have your Honor's permission at this time to take a flash picture of this exhibit so that it may be preserved?

THE COURT: You may.

(49) MR. KINNEY: Your Honor, we will not be using any more of this material that might have gotten on your robe, so if you would care to step closer to the exhibit as Mr. Hardy now explains what this demonstration has proven, if anything.

THE COURT: Very well.

THE WITNESS: It shows that when granular material is used it is thrown by the impact members way out to the ends of the shrouds. It shows that the width of the pattern will be the length, if you will, or the length of these impellers right here.

It shows that as the material gets progressively lighter in weight, that the impact members themselves will not throw the material as far as the ends — and in cases of very light material, why, it is carried around on the impact members, and will distribute heavy on the center. It doesn't go out, showing that Johnson, in order to distribute this lighter material, had to have centrifugal fan units. He had to have the openings in the side of this central housing, so they could suck the air in and get a high velocity air stream to help push the lighter material out.

We also think it shows that the width of the shroud, or the shroud, has nothing to do with the width of the pattern. The pattern is the same whether the shrouds are up or down; the shrouds being there merely to protect it from the air currents, I presume. At least, that is what he claims in his patent.

(50) By Mr. Kinney:

Q Mr. Hardy, does — I withdraw that.

Will you state what occurs within the housing of the Johnson British patent, as the lighter particles are being hurled transversely of the body through the shrouds?

A They take a trajectory or path of travel as wide as the impellers, and they go out and fall, or are thrown to the ground.

Q Is there any building up or concentration of airborne material within the lowered shroud of the Johnson patent?

A No, there is no concentration of this type.

Q I understand your testimony, then, to be that the demonstration that you have just put on shows that as the material projected becomes lighter, the distance that material is thrown, solely by reason of the rotating impellers, decreases as the lightness of the material increases?

A That is right.

Q And it is also your testimony that this demonstration proves that the distribution pattern is the same, whether the shrouds be in an elevated or in a lowered position?

A Yes. It is plainly seen, it seems to me, by looking at these patterns, that the pattern is the same whether the shrouds are down or up.

(51) THE COURT: What purpose do the shrouds have?

THE WITNESS: Johnson, as I remember the claim, is purely to keep the wind currents from disturbing the trajectory or path of the material.

* * *

(54) Q Mr. Hardy, have you studied, and are you familiar with the disclosure of the U. S. Patent No. 2,281,212 to Stoltzfus?

A Yes, I have studied it, and I have had a model made of the Stoltzfus machine.

* * *

Q I hand you what has been identified as Plaintiff's Exhibit No. 7 for identification, and ask you to state what that is.

A That is a model of the Stoltzfus machine for spreading compost and lime. And it is a true model of the machine, inasmuch as it shows the impellers and the feed shoots from the hopper to the impellers, and it shows this metal (55) mounting here to support this canvas hood around those impellers.

It shows the relationship of the impellers to the side of the body, and the mechanism for driving them. It does not have the means for conveying the material in the hopper back to the feed shoots.

MR. KINNEY: With the Court's permission, might I request that the witness step to the table having the piece of black cloth thereon, that he might demonstrate the model to the Court?

THE COURT: Very well.

(The Court, the witness, counsel, and the reporter went to the counsel table during the demonstration.)

By Mr. Kinney:

Q Mr. Hardy, I shall now ask you to demonstrate the operating characteristics of Plaintiff's Exhibit No. 7, utilizing a granular material which I am placing in the hopper of the model.

But before demonstrating, will you please indicate for the record, why the impellers are rotating as they are?

A They are rotating at this speed in order to keep the pattern of the granular material within the shroud or the canvas, within the limits of this framework.

Q Why is that limitation essential to the demonstration?

A Because that is explained in the Stoltzfus patent.

(56) Q Will you now please demonstrate the manner in which Plaintiff's Exhibit No. 7 will distribute granular material?

A We don't have the conveying mechanism, so I must push the material back to the feed shoots.

* * *

THE WITNESS: The pattern is almost entirely within the confines of the shroud — the framework.

By Mr. Kinney:

Q Will you now, Mr. Hardy, lower the shroud to the (57) position indicated in the drawings of the Stoltzfus patent, on the model, Plaintiff's Exhibit No. 7?

A Yes.

(Witness fixed the shroud in place.)

Q Will you now demonstrate the operating characteristics of Plaintiff's Exhibit No. 7?

(Witness gave demonstration as requested by counsel.)

THE COURT: Who is going to lift it this time?

MR. KINNEY: I will be more careful this time, your Honor.

First, would your Honor care to step forward and look down directly at the pattern?

By Mr. Kinney:

Q Mr. Hardy, is the resultant pattern a true and accurate pattern of what occurs following the teachings of the Stoltzfus patent?

A Yes, it is — very definitely.

Q Is that when distributing limestone and/or compost?

A Yes.

Q I shall now ask you to make one further demonstration with Plaintiff's Exhibit No. 7, using this time, talc, which is a highly pulverulent material.

First, with the shrouds in a fully elevated position, and for this demonstration, will you note and advise the Court that the operating speed of the impellers of Plaintiff's Exhibit 7 have been increased?

(58) The speed of the impellers has been increased so that with this light material we will get a pattern within the confines of the shroud.

Q Will you now, please, demonstrate?

(Witness gave demonstration as requested by counsel.)

MR. KINNEY: Would your Honor care to step forward and by looking down, note the relationship of the pattern with relationship to the contour or outline of the curtain supporting element?

THE COURT: Yes.

By Mr. Kinney:

Q Will you now, please, make one further demonstration, using talc on the same model, but wherein the shrouds or the curtains are in the fully lowered position as in the Stoltzfus patent?

Will you now make your demonstration, please?

(Witness gave demonstration as requested by counsel.)

Would you now please read into the record a comparison of the patterns obtained with the curtains in a lowered position, and a fully elevated position?

A The patterns made with the curtains up and the curtains down are very similar. The only difference being there is a slight build-up here at the edge where the wheels are — at this edge nearest the truck wheels. But the patterns are very much the same.

(59) Q Will you now explain the reason for the break in the forward edge of the pattern obtained when the model was operated with the curtains down, which break does not appear in the pattern obtained when the model was operated with the curtains raised?

A Well, the material has hit the curtain and has caused that build-up there, and the break occurring like it is shown.

Q Mr. Hardy, the portion that you referred to as the break occurring as shown, is that caused by the opening in the forward portion of the depending curtain?

A Yes.

Q Will you now, Mr. Hardy, lower the shroud to the (57) position indicated in the drawings of the Stoltzfus patent, on the model, Plaintiff's Exhibit No. 7?

A Yes.

(Witness fixed the shroud in place.)

Q Will you now demonstrate the operating characteristics of Plaintiff's Exhibit No. 7?

(Witness gave demonstration as requested by counsel.)

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THE COURT: Yes.

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Would you now please read into the record a comparison of the patterns obtained with the curtains in a lowered position, and a fully elevated position?

A The patterns made with the curtains up and the curtains down are very similar. The only difference being there is a slight build-up here at the edge where the wheels are — at this edge nearest the truck wheels. But the patterns are very much the same.

(59) Q Will you now explain the reason for the break in the forward edge of the pattern obtained when the model was operated with the curtains down, which break does not appear in the pattern obtained when the model was operated with the curtains raised?

A Well, the material has hit the curtain and has caused that build-up there, and the break occurring like it is shown.

Q Mr. Hardy, the portion that you referred to as the break occurring as shown, is that caused by the opening in the forward portion of the depending curtain?

A Yes.

Q Will you compare the patterns obtained operating Plaintiff's Exhibit 7, using granular material and with the talc?

A As you can see from the patterns before us on this black cloth, they are very, very much alike.

Q Mr. Hardy, what does this demonstration illustrate with respect to any build-up or concentration occurring within the depending curtains of the Plaintiff's Exhibit No. 7?

A It proves that there is no concentration or build-up within the shrouds.

Q Would you briefly state the path of the particles from the rotary impellers to the ground?

A Well, the path — they are thrown by centrifugal (60) force and fall to the ground in a rotary motion, by the centrifugal force.

Q Will you explain on the patterns established what the dark central portions are called by?

A That is a space immediately under the rotating impellers, which does not receive any material due to the fact that it hits the impellers and is thrown off by centrifugal force.

The space immediately under there does not receive any material.

* * *

(61) Q Have you studied, and are you familiar with the disclosures of the Hoffstetter patent? That is No. 2,500,681.

A Yes.

Q Will you state to the Court what this patent discloses — very briefly?

A It discloses an auger and chamber extending outwardly from the back of the truck to convey the material from the discharge port of the truck to either end of this shoot.

It has holes; it drops the material through to the ground.

Q Mr. Hardy, does the width of the outer chambers of the Hoffstetter patent change throughout their lengths?

A There is a plan view of this Hoffstetter machine, Figure 7, in this patent drawing. It shows, looking down on this chamber, that there is no difference in the width from the center to the outside. It is uniform.

Q Is that same observation born out in the sectional drawing of Figure 5 of that patent?

A Yes, Figure 5 is a cross section of the chamber and shows uniform widths throughout.

Q Does the Stoltzfus patent teach or suggest that the outline of the chambers be other than rectangular?

A No. I don't think so.

Q Mr. Hardy, having studied the British patent to Johnson, the Stoltzfus patent and the Hoffstetter patent, do you (62) find any teachings that would indicate that an unhoused impeller which will distribute one type of material would, if housed or enclosed, by the Jones attachment, distribute a different type of material?

A No.

* * *

MR. KINNEY: I should like to submit as Plaintiff's Exhibit No. 8, a typed copy of plaintiff's claim one. It is in the file copy, but it is a photostat and it would be most (63) difficult for your Honor to read it.

* * *

MR. KINNEY: May the record indicate that I am now handing to the witness copies of three sheets of drawings comprising part of the Jones patent application.

By Mr. Kinney:

Q Mr. Hardy, will you now please refer to claim one, and indicate if you will — first, will you start to read into the record, please, claim one, and as you read, if you will please explain what is being called for.

A Claim one begins —

"An attachment for converting a conventional mobile rotary disc-type spreader for free flowing solid materials into a spreader for pulverulent material such as phosphate, wherein the conventional spreader includes a hopper" —

And the hopper is similar to this on Plaintiff's Exhibit No. 5. This is the hopper.

"having a discharge port" —

and in the conventional spreader, it is right here on Plaintiff's Exhibit 5.

(64) "and substantially horizontally disposed rotable impeller means carried by a substantially vertically disposed shaft" —

And that is shown on this drawing of the Plaintiff's patent application — and that impeller already there.

Q Will you identify the figure, please?

A Figure 14.

Q That is element 14, is it not, of Figure 1?

A Yes. Element 14, Figure 1.

Q Will you, in your answer, refer to these figures in such a manner that the Judge might observe your answers?

A Yes.

"for rendering airborne particles of material discharged through said discharge port" —

Q Now, Mr. Hardy, that portion of claim one that you have just read, would that be a true and accurate description of a conventional limestone spreader, such as by way of example, the spreader as manufactured by Anthony Company that was in the motion picture yesterday afternoon, and which spreader is shown as item P in an exhibit comprising part of the deposition of Mr. Duis and Mr. Hatala?

A Yes, that is the conventional limestone spreader talked about in this claim.

Q Will you now continue to read from claim one, please?

A "said attachment comprising a central portion (65) dimensioned to enclose the discharge port and said impeller means," —

Q Will you now indicate that central portion on Figures two and three of the drawings comprising part of plaintiff's patent application?

A Figure 20 here is the top of the central portion, and this is the central portion right here. Twenty represents the central portion. And with the depending curtain 50 here. This is the central portion.

And in Figure 4, sheet 3-3, Figure 14 represents the impeller enclosed by this central housing.

Q And will you also indicate whether or not it is the impeller means in the central housing, Figure No. 1, sheet one of the three sheets of the drawings?

A Yes, it is.

Q Will you now continue to read from claim one?

A "said central portion including front, top and rear walls," —

Q Will you now please indicate to the Court the front, top and rear walls referred to? Use Figure 4 of the Jones patent drawings.

A Figures 26 and 28, Figure 26 is the rear wall. This represents the top wall, and this rear wall continues up and the top wall comes over to the truck and Figure 29 represents the front wall. I am speaking of front in this case (66) as being that side nearest to the truck wheels.

Q Mr. Hardy, do you find in the British patent to Johnson, a central portion which is dimensioned to enclose the discharge port, and impeller means, wherein the central portion includes front, top and rear walls?

A No, I do not. I would like to explain to your Honor why this Johnson device does not have a central portion—central portion in the same way that the Jones device has. When I disengage this Plaintiff's Exhibit 6 from Plaintiff's Exhibit 5, their center portion is the distributor mechanism, and we have a truck bed that is without any distributor on it. It is worthless for distributing material. And we don't have the covered top as we do in the — that is, a completely enclosed covered top on the Johnson device, like we have on the Jones device.

Q If the top of that distributor unit were enclosed in the British Johnson reference, would it be possible then to distribute pulverulent material?

A No, because you could not get the pulverulent material down to the impact members.

You will notice Johnson has troughs where the material comes from the truck bed down to the impeller blades.

Q Mr. Hardy, with reference now to the disclosure of the Stoltzfus patent, do you find therein a device which is a central portion including top, front and rear walls, which (67) house the discharge port and impellers?

A I don't find such a central portion as in the case of the Jones device. This is one unit. There is no central portion.

Q Will you now refer to claim No. 1 and continue to read from it?

A "and a pair of end portions each including front, top, rear and outer end walls," —

Q Will you now point these end portions out to his Honor, figures 1, 2 and 3 of the drawings?

A Twenty-two here and 22 here, represent these outer portions extending from the center chamber outward on each side. And 22 down here, and 22 here. This is a plan view looking down, and this is what we call an elevation view standing up facing it.

Q Will you now refer, and continue to read from Claim one?

A "each including front, top, rear and outer end walls," —

Q Do you find that construction shown in the drawings of the Jones application?

A Yes, and the outer end walls are shown by Figure 36. Here and here — these are the outer end walls.

Q Will you continue to read now, please?

A "said end portions hingedly secured to said central (68) portion for movement between lowered and raised positions relative thereto," —

Q Is that feature disclosed in the drawings of the Jones patent application?

A Yes, we notice it in Figure 1. The outer end wall is shown in solid lines extending, and the hinge here at 42, to the top wall of the center portion, and the dotted lines represent that outstanding end when it is rotated upward in a non-operative position.

Q Would you say, then, that in the solid outline Figure 1,the end portion is indicated in lowered position, in solid outline; and in raised in operative position in the broken outline?

A That is right.

Q Will you continue to read, please?

A "said end portions when in lowered position combining with said central portion to define an elongated unobstructed open-bottomed chamber within which chamber pulverulent material from said hopper is rendered airborne due to rotation of the said impeller means and will accumulate in sufficient concentration to effect a substantially uniform gravitational depositation through said open bottom without any appreciable blow-away of the material and thus effect a uniform application of the material on the ground." —

(69) Q Mr. Hardy, referring to the drawings comprising part of the Jones application, will you please point out to the Court a construction wherein the end portions are illustrated in lowered position to combine with the central portion to define an elongated unobstructed open bottom chamber?

A That is shown in Figure 3. Right here, that is the elevation of it when the end portions are down in operative position.

Q And what is shown in Figure 2?

A Figure 2 is plan view looking down upon the top of it, and it shows the central portion and the outstanding ends in lowered operative position.

Q Mr. Hardy, does the British patent to Johnson disclose a device that includes a pair of end portions which are hingedly mounted to something?

A Yes.

Q Now, if you are going to use that, will you read into the record —

A Plaintiff's Exhibit 6, which shows those end portions.

Q Do those end portions combined with a central portion when in lowered position, define an elongated unobstructed open bottomed chamber?

A It is very plain to see from Plaintiff's Exhibit 6 (70) it does not show an elongated open-bottomed chamber, your Honor. You will notice it is obstructed here in the center with all these paddle wheels.

Q Mr. Hardy, what does Johnson, the British inventor, refer to — how does he refer to that portion of Plaintiff's Exhibit 6, containing the impellers, and to which the outer shrouds are hingedly mounted?

A He terms it a distributor unit per se in his patent specification.

Q Mr. Hardy, in the British patent to Johnson, does pulverulent material as called for in claim one, accumulate within an elongated unobstructed open-bottomed chamber which comprises a central and hinged end portion, wherein it will accumulate in sufficient concentration to effect a substantially uniform gravitational depositation for the open bottom of the chamber formed thereby?

A No, it doesn't. The drawings even show that it doesn't fill the chamber.

Q Are you saying it doesn't?

A Yes.

Q Will you please say does not — I have trouble hearing.

THE COURT: I understood him; I think the reporter did. Did you understand him?

THE REPORTER: Yes, your Honor.

(71) THE WITNESS: I am sorry — I will try to remember that.

By Mr. Kinney:

Q Mr. Hardy, referring to claim one, you indicated earlier in your testimony that the first portion of that claim down to the phrase "said attachment comprising" — that that portion of the claim preceding "said attachment comprising" described or related to a conventional limestone-type spreader; is that right?

A Yes, that is right.

Q Will you now state what those portions of the claim, starting with the phrase "said attachment comprising" down as far as you have read into the record, to what does that relate?

A That relates to this Jones device — this Jones attachment to that conventional spreader.

Q Now, will you conclude, please, reading from claim one?

A Well, I will start with the word "means" in the fourth line from the bottom:

"means for securing said central portion to the hopper of a pulverulent distributor," —

Q Do you find such means in the drawings of the Jones patent application?

A Yes, there is in Figure 4, sheet 3 of 3; Figure 10 representing the hopper, and you can see in the drawing that (72) it is attached to that hopper by bolts or some means, and also, in Figure 29 it is attached to item 12 of the truck bed.

Q But is it not true that the claim you have just read is not limited to the particular manner in which the central portion of the Jones attachment is attached to the hopper of pulverulent distributor?

A That is right.

Q Could it be welded on?

A Yes.

Q If you wanted it removable, could it be bolted on?

A Yes.

Q Could it be held on with any other suitable means?

A Oh, yes. Any suitable means it could be attached to the hopper of the truck.

Q And the last phrase of claim one, "and means for rotating the impeller shaft." — Does that phrase refer to this portion of the limestone spreader that is used to rotate the impellers?

A Yes.

Q Mr. Hardy, do you have a copy of the British Johnson patent?

A Yes, I have. I have a certified copy.

Q Will you obtain the copy of that patent, please?

(Witness secured a copy of the patent.)

I shall now ask you whether you find anything in the (73) British patent to Johnson that would suggest that the paddle wheels-type impellers 33, 34 and 35, comprising part of his "distributor unit", could be replaced by rotary-type impellers, such as in the Stoltzfus reference, Plaintiff's Exhibit 7?

A No, I do not, and I would like to read into the record where I think Johnson disclaimed such a substitution. And that is taken from the complete specification, lines 17 to 29.

Q Are you not reading from page 3, which is the first page of the complete specification?

A Yes, I am reading from page 3 of the complete specification.

Q Will you now read into the record what you have in mind?

A "The invention concerns specifically and solely a machine for spreading fertilizers as referred to."

Q Will you stop right there, please. What are the fertilizers that he specified as "as referred to"?

A Up in line 9, right above, on page 3, it says, "This invention relates to machines for spreading agricultural lime, super-phosphates, nitro-chalk and like dry powdered fertilizers over the face of the ground," —

Q What type of materials has Stoltzfus specified — what general type or class, when he enumerates "agricultural lime, super-phosphates, nitro-chalk and like dry powdered (74) fertilizers". I beg your pardon, I believe I said Stoltzfus but I meant Johnson.

A Will you repeat that question again?

Q What general category of material is the British patent to Johnson concerned in spreading?

A Pulverulent material — fine.

Q Will you now please continue reading from where you left off?

A "For example, it is in no way connected with machines for spreading sand upon, say, a road surface.

Such machines, as is known, are generally concerned with an area bounded by the lateral confines of the machine, whereas a machine for spreading fertilizers is intended to cover a much wider area, considerably exceeding the widths of the machine."

Q From that language, what conclusion do you reach?

A Johnson, in this patent, is building a machine to spread light materials, fertilizers, and disclaiming any heavy materials; the use of that machine for any heavy materials.

Q Would the language that you just read lead one skilled in the art to substitute the paddle wheel-type impellers found in the Johnson distributor for the rotary impeller-type distributors of Stoltzfus?

A It certainly would not, because he has made a machine to spread fertilizers. That is the purpose.

(75) Q You have carefully studied the disclosures of Stoltzfus, the British patent to Johnson and the patent to Hoffstetter?

A Yes.

Q Do you find in those patents any teachings or any suggestions that the Jones attachment device would follow from replacing the impellers of the distributor unit of the British patent with the rotary impellers of Stoltzfus?

A I certainly do not.

Q Mr. Hardy, of your own knowledge, has the Jones attachment for the conventional limestone spreader satisfied a long-needed and recognized want in the industry?

A Absolutely. It is definitely needed. It has definitely revolutionized the spreading of this phosphate in the middle West.

Q Has it made the task of spreading phosphates easier?

A Not only easier, but more successful.

Q Has it made it a spreading of phosphates cheaper?

A Yes.

Q Of your own knowledge, do you know whether there is a genuine demand for the Jones attachment?

A I certainly do know there is a definite general demand for this unit—this attachment.

* * *

(77) MR. MOORE: May I interrupt? I think we can confine this controversy to claim one.

THE COURT: I was going to say, the respondent depends on claim one.

MR. MOORE: Well, we will agree that if your Honor should find claim one allowable, they may have the remaining claims except 29, 30 and 31. They were rejected as prolix, and I question whether Mr. Kinney would press for those claims if he got the others.

* * *

(78) MR. KINNEY: Plaintiff's Exhibit for identification No. 9 contains those claims other than claim one that we are concerned with.

* * *

(82) CROSS-EXAMINATION

* * *

Q Mr. Hardy, do you have in your hand a copy of the Stoltzfus patent, 2281212?

A Yes, I have.

Q That patent shows, does it not, a framework, 20?

A Yes, that is the framework that holds the shrouds.

Q And depending from that framework, 20, are curtains, 21, isn't that true?

A That is right.

Q And covering the top, the framework, is a fabric covering, 22, isn't that true?

A Yes.

Q Now, included within the framework, 20, and within the top, 22, and the depending curtains, 21, there are twin impellers, marked 12, are there not?

A Yes.

Q And those twin impellers, compare in structure and operation with the impellers, shown in plaintiff's exhibit No. 1, which I show you, do they not?

A Only in structure and operation, and not in location.

Q Aren't the twin impellers shown in plaintiff's (83) exhibit No. 1 driven at high rotational speed?

A They are driven at variable speed.

Q Aren't they ordinarily driven at high rotational speed?

A Well, I don't know what you mean by "high". I wouldn't say they are driven at a high speed. It depends.

(84) Q Aren't they driven at a high enough speed to establish turbulence in the material being operated upon?

A Yes.

Q Now, do not the curtains which enclose the framework, 20 in the Stoltzfus patent, confine the scatter distance of the material being distributed?

A I don't think so, and I would like to read, your Honor, from the patent, if I may in explaining that; my idea of that question.

THE COURT: Very well.

THE WITNESS: It is clearly pointed out in that patent, and I am reading from page — I don't see a page number, but I am reading lines 17 to 22 —

> "The purpose of the curtains is to protect the distribution of the material from the discs from air currents or wind so that the uniform distribution of the material will not be affected on a windy day."

By Mr. Moore:

Q Now, what part of that description in the Stoltzfus patent do you say limits the rotation of the speed of the twin impellers?

A They have a gear box that varies the speed of the impellers. Line 40 — "The shaft is geared to a shaft forming a part of a variable speed transmission. * * *"

Q But there is nothing in that language saying that (85) the variable speed transmission shall not drive those impellers at a high speed, is there?

A Beg pardon?

MR. MOORE: Will the reporter read the question, please?

(The reporter read the pending question.)

THE WITNESS: No, I don't think there is anything in there. It wouldn't drive them at a high speed.

By Mr. Moore:

Q And in that Stoltzfus patent, there is disclosure, is there not, of the framework extending beyond the confines of the spreader per se?

A Yes.

Q In other words, that structure shown in Stoltzfus is such a structure as might be used for distributing fertilizer?

A Not in the sense of the Jones attachment, because the Stoltzfus view here on Figure 3 shows that there is an open section next to the truck in that.

Q The framework, 20, with the top, 22, and depending curtains, 21, would not be needed with that spreader if the spreader were used for distributing sand, would it?

A No, I wouldn't think so.

Q You wouldn't need the distribution over as wide an area with the sand as you would with fertilizer, would you?

A You might, depending what you were spreading the (86) sand for.

Q Presuming you were spreading the sand for sanding roads.

A You would want it over a very wide area — perhaps, you might want to limit it.

Q Isn't that the basis on which you distinguished the fertilizer spreaders and the sand spreaders in connection with the British Johnson patent?

A But I said you might want to spread a wide area with sand, but the Johnson patent says specifically that it is usually confined to the narrow pattern within the limit of the structure.

Q And that is useful in sanding roads to get a narrow strip on a narrow road, for instance?

A Sometimes.

Q Whereas with a fertilizer spreader, you wouldn't be confined by the limit of the road, and you want to spread as wide an area as possible at one time?

A That is right.

Q Now, if you increased the speed of the impellers, 12, in this Stoltzfus structure, you would get a wider dispersion area, wouldn't you?

A Beyond the confines of the framework, it is possible you would.

Q And if you increased the speed of the impellers, 12, (87) in the Stoltzfus device, you might well increase the concentration of the fertilizer under the curtains, isn't that true?

A Only where the material hit the curtains underneath the paddle wheels, the rotatable impellers, I don't think you would.

Q The impeller might have the effect of a fan?

A No.

Q It wouldn't tend to circulate the material underneath the curtains?

A No, not in the sense that the Jones device does, because this is something that air can get through. You don't have the closed condition that you do in the Jones attachment.

Q Would it, in any sense, fan the material underneath the shrouds?

A No, I don't think so, because it is thrown centrifugally after the edges of the fan. You wouldn't concentrate it in the same manner as the Jones attachment.

Q Would it be concentrated in any manner?

A Only along the edge of the curtain, perhaps.

Q Would you agree that the impeller, 12, in the Stoltzfus device, might operate as a fan?

A Not in the same sense as the British impeller.

Q Would it operate in any sense as a fan?

A Yes, it might in a closed housing such as the Jones (88) attachment.

Q Isn't it true that the Stoltzfus device, except for a narrow opening shown in Figure 3, that the Stoltzfus twin impellers, 12, are enclosed?

A They are enclosed — not in the same sense that the truck impellers are enclosed by the Jones attachment.

Q They are covered by a fabric top, are they not?

A I just said a canvas top.

Q Let's refer to the Stoltzfus specification, the second column, beginning at line 21, the language is this, is it not? "The frame, 20, also carried a top wall, 22, of fibrous material. * * *"

A Yes, it says "fibrous".

Q Now, around the twin impellers, is a curtain, 21, in the Stoltzfus device, is there not?

A Yes.

Q And over the top of those twin impellers, is a wall, 22, of fibrous material?

A Yes.

Q And it is shown, for instance, in Figure 1 of the Stoltzfus patent, the curtains, 21, descend approximately to ground level, do they not?

A Yes, approximately — within a short distance from the ground.

Q And the curtains, 21, circumscribe those twin (89) impellers, 12, except for an opening centrally of the front wall of the enclosure, isn't that true?

A Yes, I think so.

Q Now, let's refer to the British Johnson patent. I believe you have the copy of that at hand, isn't that true?

A Yes.

Q Now, directing your attention to Figure 5, the British Johnson patent, that discloses, does it not, what the patentee calls shroud 48?

A Yes.

Q Those plates, 36, extend in the same direction as the rearward long sides of the shrouds, 48, isn't that true?

A That is right. And at the back of that center section, we have plates 37, which are in fact a continuation of the similar parts of the shroud, 48.

Q Yes, I take it that Figure 37 is a plate, that is opposite plate 36.

MR. KINNEY: Pardon me, your Honor, might I request that Mr. Moore's last question be read? I didn't understand it.

(The pending question was read by the reporter.)

By Mr. Moore:

Q You may consider I said "a plate", if you will, Mr. Hardy.

A Was I supposed to answer — had I answered?

Q You had not answered.

(90) A It is a plate.

Q And it is a plate which extends in the same direction as the front long sides of the shrouds, 48?

A Yes.

Q Now, let's refer to the specification of the Johnson patent.

First, I will direct your attention to page 3, the sentence beginning at line 73 — have you read that section, Mr. Hardy?

A I have read it several times. I haven't read it just this minute.

(Witness read the section referred to.)

How far do you want me to read?

Q The sentence.

A Sentence 73?

Q Beginning at line 73.

A You want me to read that out loud?

Q Read it to yourself, if you will.

A All right, I have read down to 86.

Q Now, in that portion you have read, the patentee, Johnson, refers to "impact member", singular, and "impact members," plural, does he not?

A That is right.

Q And he does similarly in the sentence beginning at line 40 on page 7 of the specification?

(91) A He refers to impact member, there.

Q And also, refers to impact members, plural, isn't that true?

A Well, he just says impact member in line 40.

Q This is page 7, first column.

A I am sorry — I am on the wrong page.

Q Beginning at line 40 —

A Yes, that is right.

Q Now, you have referred to claims of the plaintiffs, application here. I ask you to refer to claim one of this Johnson patent, which appears on this same page, 7, of the patent.

A Yes.

Q You find there defined a machine for spreading powdered fertilizer in which a rotary impact member is a part of the machine, do you not?

A It says the machine comprises the impact member — the complete machine, not an attachment.

Q It is "a machine for spreading dry powered fertilizers over the face of the ground, comprising in combination a rotary impact member whose rotational axis is horizontal and parallel to the path of travel of the vehicle. * * *"

A That is what it says.

Q But it specifically refers to one rotary impact (92) member, isn't that true?

A It says, "a rotary impact member whose rotational axis is horizontal and parallel to the path of travel of the vehicle. * * *"

Q But it refers to a single rotary impact member, isn't that true?

A Well, it says a rotary impact member, and member is singular.

Q That is right.

Now, if the impact members, 33 and 34, shown in the Johnson patent, are driven at a low speed, what is the effect upon the material being distributed?

A In case of the light pulverulent material, it is not thrown out very far with just the impact. It tends to come up between the two and is distributed by a third impact member.

Q Well, Johnson deals, does he not, with light pulverulent material?

A Yes, but just the impact members themselves wouldn't throw it very far.

Q Increasing the speed of the impact members 33 and 34, will increase the throw of the material?

A It was shown in Plaintiff's Exhibit that as the material gets lighter, just the impact alone doesn't throw the material. It establishes a certain trajectory.

(93) Q Let's limit ourselves to the showing of the Johnson patent here, and I ask you, using the same material and increasing the speed, would you get a greater throw of the material?

A Only to a certain degree.

Q How do you explain that the material is distributed in an area transverse to the machine within limits set by the shrouds, 48?

A The width is determined by the length of these impact members, and only by the use of a high velocity air stream does he get the impact members to throw that fine material far out in the shroud, and it goes to the ground.

Q Is it your testimony that when the impact members 33 and 34, are driven at a low speed, the material is only thrown a given distance?

A I wouldn't be thrown very far; it will tend to go right around with that impact member.

Q You are testifying that if the impact members 33 and 34, are driven at a greater speed, that the same material would be thrown a greater distance from the center of the machine?

A It will be thrown to a degree, a greater distance, but it forms a certain trajectory that it goes into the ground. We have shown that in the plaintiff's exhibits.

Q It is something like sparks coming off a revolving (94) rocket?

A I wouldn't think so — it is something similar, but sparks have no weight in themselves. They don't go to the ground.

Q Well, is it your testimony that the particles distributed by the impact members, 33 and 34, in the Johnson device, are distributed exclusively by centrifugal force?

A No, not in the Johnson device. I think he has to have this high velocity air stream, too, in the case of lighter materials.

Q Isn't it a fact that the impact members in the Johnson device are driven at a high rate of speed?

A Well, I haven't found anything that says that they are driven at a certain rate of speed. It is a variable rate of speed.

Q Well, let's refer to the specification of that Johnson patent, page 5, the first column, beginning at line 34.

Don't you find there a statement to the effect that the impact members are rapidly revolvable?

A I don't know whether rapidly is the same thing as high rate of speed in all cases.

Q Let's refer again to line 79, and I ask you if you don't find there a reference to a rapidly moving blade of the impact members?

(95) A Line 79?

Q Line 79, page 5, the sentence beginning on line 79.

A Yes, it says there "rapidly moving blades", and in case of the lighter materials they probably revolve a lot faster in order to get this high velocity jet air stream in there to assist the impellers in distributing that light material.

Q On page 7 of his specification, Johnson refers, does he not, to the impact members 33 and 34 generating a current of air by their rotation. I am referring to the sentence beginning at line 5.

A Yes.

Q Is it your testimony that you do not get turbulence in this Johnson device?

A I don't think so, in the same extent that you get it with the Jones attachment. You get a direct pattern, but that is due to the impellers. You don't get the turbulence.

Q If you did get turbulence in the Johnson device, wouldn't you get a concentration of the pulverulent material?

A Not in the same manner that you do with the Jones device, because you don't have a completely covered, closed circuit — an unobstructed, elongated area.

Q Let's refer to the Figure 1 of the Johnson patent. Doesn't Johnson there show a plate covering the top of the central portion of his spreading attachment?

(96) A Yes, but it hasn't any ends in it as far as I have been able to determine.

Q Aren't we dealing there with a cross section?

A Yes. In that figure.

Q And isn't there a member indicated as beginning on a horizontal line below the reference numeral 12?

A Yes.

Q And it is continuing down to a line that is at the base of the conveyor which the roller 7 is a part?

A Yes, it is my opinion that is on there so that this material which is on this belt conveyor, which I think is Figure 6, to keep it from going on out and over the top of that central section and not down in the parts, and I don't see any place where he has closed ends.

Q Well, we can agree that that shows a cover above the impact members, can we not?

A It is not the same kind of a cover that we have in the Jones attachment.

THE COURT: Does it have a cover?

THE WITNESS: This is more like a shield to keep that material, when it is discharged from that rear port, from missing that center section and falling on over to the ground. It is a guide for conveying the material into the center section of the British device.

(97) By Mr. Moore:

Q Tell me how it guides the material into the British device?

A You will notice the belt comes through the hopper bed; over the roller and back under the bed. Then there is a short space from the edge of the roller and the belt to that plate that comes down from the hopper, and if you didn't have that plate there, I don't think the material would get down in that center section.

It would have a tendency to keep on and spill out. I don't think it is put there to cover up a central section in the same manner that we cover up, or the Jones device covers up the rear discharge port to form a closed, elongated chamber.

Q That plate would prevent the pulverulent material from spilling over the top of the Johnson attachment, would it not?

A Spilling over the ports. You know those tops are grooves down to the impellers. It is not a top in the same sense as the Jones attachment.

Q Were you aware, Mr. Hardy, of the fact that the Anthony Company once manufactured the device shown in the application in suit here?

A Yes.

Q Did you consult anyone in the Anthony Company with respect to your testimony here?

(98) A No.

Q And did you consult anyone in the Anthony Company with respect to any correspondence they might have had with respect to the Johnson British patent?

A I don't think so. I might say that I was employed by Mr. Jones to make some drawings way back there in '48 to give to the patent attorney. And I did write Mr. Duis asking him — let's see, that was in, along in February of this year — asking him if he would — I wrote him on behalf of Jones — asking him if he would let Mr. Jones take a deposition from him. That is all. I have never talked to Mr. Duis about anything that went into the deposition.

As a matter of fact, I only saw it after it was delivered to Mr. Kinney. I wasn't present at the taking. I didn't know what they said, or anything.

Q Did you seek any information as to whether or not this Johnson device had ever been embodied as a practical device and used in England, for instance?

A I don't recall.

Q As a consulting engineer, such information would have been important to you in forming your opinion as to the device?

A Yes, but we wouldn't build a device like that in this country for that purpose; it is too expensive.

Q Nor would you reach such a negative conclusion on (99) the basis of the operation of these small models, would you have?

A I would like to have that question read back, if I may.

(The reporter read the pending question.)

THE WITNESS: I just don't know how to answer that; what you mean by "negative conclusions".

What I was saying is, that after studying this Johnson device from those things there, you wouldn't think it would work satisfactorily for what we want to do.

Q But if someone came to you with the suggestion that on the basis of your opinion they were going into manufacturing, you would want more than the operation of such models to form your opinion, wouldn't you?

A I don't know. I think it would be very helpful to see an operation like that. You would be able to form your opinion better.

Q It would be helpful, but not conclusive.

A I think it is pretty conclusive. It won't do what we want to do. It would show the defects in the device. It would be helpful in that respect.

Q Now, you have suggested that Johnson in his patent refers to his device at the end of the ordinary spreader as a distributor. Could you call my attention to where there is such a statement in the Johnson patent?

(100) A Yes, here is what it says. Beginning with line 110 — or you might begin with line 108 —

Q What page?

A Page 3. I beg your pardon —

> "Figure 3 is a fragmentary rear elevation of the machine drawn on a larger scale than figures 1 and 2 and showing the details of what may conveniently be referred to as the 'distributor unit' of the machine, * * *."

and then it goes on and tells what is on that distributor unit.

MR. MOORE: No further questions.

THE COURT: Mr. Kinney, can you indicate how much longer you will be? Do you have any other witnesses?

MR. KINNEY: I would like to have a short redirect and about a two-minute statement.

THE COURT: Very well.

REDIRECT EXAMINATION

* * *

Q Referring to the words distributor unit on page 4, line 2, will you indicate for the record whether or not the term distributor unit is any way set off?

A In any way set off?

Q Set off — yes. Is it not set out between quotation marks, Mr. Hardy?

A Yes, yes, that is right. Those two words "distributor unit" are in quotation marks.

(101) Q I believe it is your testimony that the British patent to Johnson indicates that in order to distribute pulverulent material that a high velocity air stream is essential?

A Yes, definitely.

Q Would not the model, plaintiff's exhibits 5 and 6, prove that as stated in the British patent, that air is essential in order to effect the desired distribution of pulverulent material throughout the length of his shrouds, 48?

A Yes, that is what we proved by the models.

Q Mr. Hardy, directing your attention to your testimony on cross examination, it was there stated, reading from the Johnson patent, that one impeller might be used.

In the event that but one impeller, such as 33 or 35 would be used, will you briefly state in what manner the pulverulent material would thereby be distributed?

A Well, if you were only using one impeller, you would get it thrown out in a certain trajectory on this one side, but in the center it would come down on the ground and pile up.

Q Using one propeller, would any material be impelled through that shroud on the opposite side of the machine?

A No.

Q Therefore, is it a correct conclusion that if one impeller is used in the Johnson British patent, that you would (102) then hurl the material to but one side of the housing?

A If you only used one impeller, you would only get it thrown to one side.

Q Would the use of but one impeller in that way develop concentration within the one shroud, or would it in any way develop concentration within the one shroud?

A No — no.

Q Mr. Hardy, is there anything in the teachings of the Stoltzfus patent that would suggest that pulverulent material could be caused to accumulate within the area defined by the depending curtains, in the event that the impellers were rotated at tremendously high speed?

A No — no.

Q Will you please read into the record the date of the Stoltzfus patent?

To expedite matters, is it not dated April 28, 1942, and the application was filed July 27, 1940?

A That is right.

Q Do you know of your own knowledge whether or not conventional limestone spreaders such as those manufactured by the Anthony Company, were in extensive use prior to the year 1940 in this country?

A Yes, they were in extensive use.

Q Of your own knowledge, do you know that such conventional limestone spreaders were in common use in at least the Illinois area as early as 1930?

(103) A I have been told they were. I wasn't living in Illinois in 1930, but I understand they were in common use. A lot of older type machines. I came to Illinois in '38.

* * *

MR. MOORE: May I suggest that you have not introduced Plaintiff's file wrapper. It is an indispensable part of the case.

MR. KINNEY: I am sorry. Please overlook that oversight, your Honor.

THE COURT: It will be received.

* * *

PLAINTIFF'S EXHIBIT 10

(1)

-JONES PATENT APPLICATION, AS FILED FOR APPARATUS FOR AND METHOD OF DISTRIBUTING PULVERULENT MATERIAL.

This invention relates to a distributor for finely pulverized material, such as, by way of example, phosphate, and more particularly to a non-mechanical distributor adapted to be secured to and carried by the discharge end of the bed of a conventional limestone spreaded.

An object of the invention is to provide a pulverulent distributor which may be attached to a conventional limestone spreaded for converting it into a highly efficient phosphate spreader.

Another object of the invention is to provide a pulverulent distributor for attachment to a conventional limestone spreader, which distributor is so constructed and arranged as to non-mechanically produce a uniform distribution of airborne pulverulent material throughout its length and breadth and wherein the dimensional characteristics of the distributor are such as to provide a substantially uniform distribution pattern of pulverulent material onto the ground.

A further object of the invention is to provide a distributor for pulverulent material which is rendered (2) airborne within the distributor by impeller means comprising part of the standard discharge assembly of conventional limestone spreaders.

Still a further object of the invention is to provide a non-mechanical pulverulent distributor for attachment to the discharge end of a conventional limestone spreaded, which distributor will thoroughly and effectively provide an even and uniform distribution of pulverulent material, such as, phosphate which is the most difficult to distribute of all commercially available pulverulent materials, throughout a width of from 3 to 5 times the width of the bed portion of the limestone spreader to which the distributor is attached.

Another object of the invention is to provide a pulverulent distributor in the form of an inverted substantially U-shaped shroud or housing to be secured to and carried by the rear portion of the bed of a commercial limestone spreader, said distributor comprising a central portion and a pair of end portions selectively movable with reference to the central portion between raised inoperative and lowered operative positions.

(3) Another object of the invention is to provide a shroud-type pulverulent material spreader-attachment for conventional limestone spreaders, and the like, which will non-mechanically control the density and distribution of a mass of pulverulent particles rendered airborne by the conventional impeller mechanism of the limestone spreader.

Still a further object of the invention is to provide a pulverulent distributor having the hereinabove described characteristics and which is provided with baffle means which continually and automatically preclude stratification of the pulverulent material being discharged therefrom during those periods of time when the uniformity of the material to be distributed is irregular or lumpy, such as occurs when the pulverulent material has become wet.

A further object of the invention is to provide a simple, foolproof pulverulent distributor free of moving parts which may be easily attached to or detached from a commercially available or standard "spreader" type truck bed.

Another object of the invention is to teach a (4) method of effecting an even and uniform distribution of airborne pulverulent material.

These and other objects are attached by the means described herein and as disclosed in the accompanying drawings, in which:

Fig. 1 is a partial end elevation of a distributor or spreader attachment of the present invention operatively associated with the rear portion of a conventional "spreader type" bed,

Fig. 2 is a top plan view of the spreader attachment of the present invention.

Fig. 3 is an end view of the device of Fig. 2.

Fig. 4 is a sectional view taken on line 4-4 of Fig. 1.

Fig. 5 is an enlarged top view of the hinge construction comprising a detail of the present invention.

Fig. 6 is a side view of the detail of Fig. 5.

Fig. 7 is a vertical section taken on line 7-7 of Fig. 1.

(5) Fig. 8 is a partial top plan view showing an alternate form of construction of an end portion of the device.

At the outset it should be understood that phosphate and other finely pulverized substances which are commercially available for distribution upon fields, present, and for many years past have presented distribution problems which the device of the present invention has solved.

Heretofore complicated, expensive and elaborate equipment has been utilized in an effort to distribute, in an even ground-pattern pulverulent material, such as, by way of example, phosphate. These devices have utilized compressed air, screw conveyors, belt conveyors, perforated piping, and other expedients for the purpose of endeavoring to obtain an even distribution of the pulverulent material. However, none of these prior devices have been entirely acceptable to the farmer since they are all subject to certain limitations and are burdened with inherent disadvantages which have greatly restricted their widespread adoption and use.

(6) To further indicate the magnitude of the problem solved by applicant, it will be noted that it is and has been the common practice to spread pulverulent material, such as phosphate during those early morning hours when the

prevalence of ground winds is at a minimum, that is, aound 3 A.M. When spread during the day season, pulverulent material and particularly phosphate, by reason of its inherent physical characteristics, will billow and drift in such a manner as to render it practically impossible to obtain uniform distribution on the ground. When compressed air, screw or belt type of conveyors are utilized, operational difficulties are frequently encountered which result in clogging or jamming of the distributing mechanism, as a result of which the product will be unevenly distributed, thereby necessitating a succession of operations until the trouble has been remedied. The most common sources of trouble may be attributed to the presence of foreign substances, such as sticks and stones in the pulverulent phosphate, or the presence of excessive moisture which causes a lumping or balling up of pulverulent particles.

The distributor, or spreader attachment of the present invention eliminates all of the disadvantages inherent in the prior art devices and enables the farmer (7) to obtain a superior and even distribution of pulverulent phosphate onto his ground in an even ground pattern using a commercially available limestone spreader as the storage and distributing media for the phosphate.

With reference now to Fig. 1, the numeral 10 indicates generally the hopper or body portion of a spreader-type device, such as, by ways of example, a commercially available limestone spreader. The bottom of the hopper or bed is provided with suitable means such as a screw or endless conveyor which is operable for transferring the contents of the hopper to a discharge port 12 (see Fig. 4) thru which the contents of the device are discharged onto an impeller 14 which is caused to rotate by any suitable mechanism not pertinent to the disclosure of the present invention.

It should be understood that the present invention is not directed to nor concerned with the structural details of the hopper, conveyor or impeller; however, for detail and clarity of understanding the Baughman Patent No. 2,120,169, dated June 7, 1938, may, by way of example, be referred to as illustrating a typical commercial device of the so-called "spreader" or limestone spreader, as the (8) term is used herein.

The spreader attachment of the present invention comprises three portions, a central portion 20 and a pair of end portions 22.

As best disclosed in Fig. 4, central portion 20 is substantially U-shaped in cross section comprising a rear wall 26, a top wall 28 and a front wall 29. This central portion is dimensioned to be releasably secured to the rear portion of hopper 10 and is dimensioned to enclose discharge port 12 and impeller 14. It should be understood that on some spreader devices two or more impellers may be provided instead of the one as illustrated in Figs. 1 and 4; however, for the purposes of the present invention it will be noted that the size of the central portion will be so proportioned as to house whatever impeller means are provided on the particular type of spreader mechanism being used. Attachment of the central portion to the truck bed or hopper may be accomplished by means of suitable structural members which are proportioned to engage parts of the hopper, being securely though releasably fastened thereto by means of bolts or other suitable fastening means.

(9) With reference now to Figs. 2, 3, and 7, it will be noted that each of the end portions 22 is generally U-shaped and includes rear, top, front and end walls 30, 32, 34 and 36, respectively.

In the preferred embodiment of the invention, end portions 22 are hingedly secured to central portion 20 for enabling the end portions to be moved between lowered and raised positions, see Fig. 1. As best disclosed in Figs. 5 and

6, the end portions are secured along the inner ends of their top wall portions 32 to the top wall portions 32 of the top wall 28 of the central portion. A structural element 40 circumscribes the upper edge of the front and rear walls of the end portions 22, and a hinge member 42 is provided between complementary adjacent portions of the central and end portions, as disclosed.

When the end portions are in a lowered position, they combine with the central portion to define an elongated open bottomed chamber, the overall length of which is the sum of the individual lengths of central portion 20 and end portions 22. Highly satisfactory results have been (10) obtained when the overall length of each of end portions 22 has been of a dimension of from 1 to 3 times the overall width of central portion 20. It will likewise be noted that the width dimension of each end portion adjacent the central portion is substantially equal to the width dimension of the central portion; however, the width dimension of each end portion diminishes from a maximum adjacent the central portion to a minimum adjacent its outer end or wall. Highly satisfactory results have been obtained when the minimum width of the end portions has varied from 1/4 to 1/2 of the maximum width adjacent the central portion.

With reference now to Figs. 1 and 4, it will be noted that pulverulent material will be emptied thru discharge port 12 disposed in the rear of hopper 10 onto impeller 14, which impeller, by reason of its high rotational speed, will render the pulverulent material discharged thereupon airborne. The presence of the side, top, and rear walls of the central and end portions will confine the scatter-distance or dispersion area of the pulverulent material whereby the density of the airborne pulverulent (11) material will increase within the chamber to such an extent that it will, in effect, become saturated and be evenly and continuously dispersed thru the open bottom onto the surface of the ground.

Preferably, a depending apron 50, fabricated from canvas, or other flexible material, is secured to the lower periphery of each of the central and end portions, wherein the lower edge 52 of said flexible apron terminates adjacent, but in spaced relationship with the surface of the ground.

Uniformly, phenomenal results have been obtained from my device regardless of the particular type of "spreader" to which they are attached, and although I am unable to explain the precise reason therefor, it provides an even and uniform distribution of pulverulent material throughout its entire length regardless of the condition of the ground, whether bumpy or smooth.

Highly satisfactory results have been obtained when using a pulverulent distributor having the hereinabove described characteristics. It should be noted that the presence of sticks, twigs, stones and other extraneous material present in the pulverulent material will not clog, (12) jam or otherwise impair the operating characteristics of the device, since these foreign substances, being too heavy to be airborne will fall quickly and harmlessly to the ground thru the open bottom of the chamber.

In those instances where the phosphate, or other pulverulent material, to be distributed is lumpy or balled-up by reason of too high a moisture content of the pulverulent material contained within hopper 10, there will be a tendency for such material to be thrown the length of end members 22 whereby to impinge upon end walls 36 thereof. When such a condition prevails, the ground pattern will indicate signs of stratification as evidenced by an excessive deposit of material adjacent the outer ends of the end portions.

I have found that the use of a baffle 60 fabricated from a sheet of flexible material, such as canvas, rubber, or the like, suspended about midway of the length of an end portion and with its upper edge spaced downwardly from and beneath the inner face of top wall 32 by a dimension approximating 30% to 45% of the overall height dimension of the side walls, and wherein the end edges are laterally spaced from their adjacent front or rear walls 30 and 34, by a dimension approximating 2 1/2 inches, will (13) effectively eliminate such stratification whereby a uniform ground pattern will be obtainable at all times even though the pulverulent material may be moist and have a tendency to ball-up, become lumpy or form pellets. The flexible barrier or baffle 60 is free to swing about and from a horizontal axis defined by transverse member 64 opposite portions of which may be suitably journaled in the front and rear walls, respectively, as clearly disclosed in Fig. 7. The presence of a barrier or baffle member 60 will eliminate the stratification which would otherwise occur in those instances when the pulverulent material of hopper 10 is moist, said barrier intercepting the travel of such pellets through to the end portions but without interrupting or impairing the desired distribution of the other airborne particles. At the present time, I am unable to explain the reason for this phenomenon, however, it is effectively and efficiently eliminated by the presence of the baffles, as indicated.

When it is desired to move the device from place to place, such as from field to field, end members 22 may be elevated to the position indicated in dotted outline in Fig. 1, it being understood that they may be retained in elevated position by attachment means denoted generally (14) by the numeral 70.

The instant spreader attachment, by reason of its shape characteristics enables material, such as phosphate to be spread faster and more uniformly than has heretofore been possible. By way of example, in a recent competitive test, applicant's device, secured to a standard limestone spreader arrived at a field one half hour after a competitive, commercially available pulverulent spreader had started to distribute an identical load of phosphate onto a field. Applicant's device spread its complete load of phosphate in a substantially even and uniform ground pattern ten minutes before the load of the other device had been distributed! These results are typical and are being duplicated daily in central Illinois in every instance wherein applicant's attachment has been associated with the discharge hopper of commercially available "spreaders".

With reference now to Fig. 8 it will be observed that end portion 22 has been hinged as at 80 on top wall between its ends thereby enabling a compact folding of the end portions whereby not to project or extend above the body of hopper 10 when those parts between hinges 42 and 80 are fully elevated.

(15) WHAT IS CLAIMED IS:

1. A spreader attachment for a pulverulent distributor of the type characterized by a hopper having a discharge port and impeller means for rendering airborne particles of material discharged through said discharge port, said attachment comprising a substantially U-shaped central portion dimensioned to enclose the discharge port and said impeller means, said central portion including front, top and rear walls, and a pair of U-shaped end portions each including front, top, rear and outer end walls, said end portions hingedly secured to said central portion for movement between lowered and raised positions relative thereto, said end portions when in lowered position combining with said central portion to define an elongated open-bottomed chamber within which airborne pulverulent material from said hopper will accumulate in suffiicient concentration to effect a substantially uniform gravitational depositation through

said open bottom, and means operable for securing said central portion to the hopper of a pulverulent distributor.

(16) 2. A spreader attachment for a pulverulent distributor of the type characterized by a hopper having a discharge port and impeller means for rendering airborne particles of material discharged through said discharge port; said attachment comprising a substantially U-shaped central portion dimensioned to enclose the discharge port and said impeller means, said central portion including front, top and rear walls, and a pair of U-shaped end portions each including front, top, rear and outer end walls, said end portions hingedly secured along their top walls one each to an opposite edge of the top wall of said central portion for movement between lowered and raised positions relative thereto, said end portions when in lowered position combining with said central portion to define an elongated open-bottomed chamber within which airborne pulverulent material from said hopper will accumulate in sufficient concentration to effect a substantially uniform gravitational deposition through said open bottom, means operable for securing said central portion to the hopper of a pulverulent distributor, and flexible means depending from the lower perimeter of said central and end portions for increasing the effective volume of said chamber and locating the discharge zone of pulverulent material adjacent the ground.

(17) 3. A spreader attachment for a pulverulent distributor of the type characterized by a hopper having a discharge port and impeller means for rendering airborne particles of material discharged through said discharge port, said attachment comprising a substantially U-shaped central portion dimensioned to enclose the discharge port and said impeller means, said central portion including front, top and rear walls, and a pair of U-shaped end portions each including front, top, rear and outer end walls, wherein the

overall length dimension of each end portion is of a dimension from one to three times the overall length of said central portion, said end portions hingedly secured at their top walls to said central portion for movement between lowered and raised positions relative thereto, said end portions when in lowered positions combining with said central portion to define an elongated open-bottomed chamber within which airborne pulverulent material from said hopper will accumulate in sufficient concentration to effect a substantially uniform gravitational depositation through said open bottom, and means operable for securing said central portion to the hopper of a pulverulent distributor.

(18) 4. A spreader attachment for a pulverulent distributor of the type characterized by a hopper having a discharge port and impeller means for rendering airborne particles of material discharged through said discharge port, said attachment comprising a substantially U-shaped central portion dimensioned to enclose the discharge port and said impeller means, said central portion including front, top and rear walls, and a pair of U-shaped end portions each including front, top, rear and outer end walls, wherein the width of each end portion uniformly reduces from a maximum adjacent the center portion to a minimum adjacent their respective outer end, said end portions hingedly secured to said central portion for movement between lowered and raised positions relative thereto, said end portions when in lowered position combining with said central portion to define an elongated open-bottomed chamber within which airborne pulverulent material from said hopper will accumulate in sufficient concentration to effect a substantially uniform gravitational depositation through said open bottom, and means operable for securing said central portion to the hopper of a pulverulent distributor.

(19) 5. A spreader attachment for a pulverulent distributor of the type characterized by a hopper having a discharge port and impeller means for rendering airborne particles of material discharged through said discharge port, said attachment comprising a substantially U-shaped central portion dimensioned to enclose the discharge port and said impeller means, said central portion including front, top and rear walls, and a pair of U-shaped end portions each including front, top, rear, and outer end walls, wherein the width of said end portions adjacent said center portion is substantially equal to the width dimension of said center portion, said width being of a dimension from two to four times greater than the width of said end portions adjacent their outer ends, said end portions hingedly secured to said central portion for movement between lowered and raised positions relative thereto, said end portions so proportioned that when in lowered position they combine with said central portion to define an elongated open-bottomed chamber within which airborne pulverulent material from said hopper will accumulate in sufficient concentration to effect a substantially uniform gravitational depositation through said open bottom, and means operable for securing said central portion to the hopper of a pulverulent distributor.

(20) 6. A spreader attachment for a pulverulent distributor of the type characterized by a hopper having a discharge port and impeller means for rendering airborne particles of material discharged through said discharge port, said attachment comprising a substantially U-shaped central portion dimensioned to enclose the discharge port and said impeller means, said central portion including front, top and rear walls, and a pair of U-shaped end portions each including front, top, rear and outer end walls, wherein the overall length dimension of each end portions is from one to three times the overall length of said central portion, and wherein the width of each end portion tapers from a maxi-

mum equal to the width of said central portion at their inner ends to a minimum width of from one-fourth to one-half of their maximum width at their outer ends, the top portions of said end portions hingedly secured to the top of said central portion for movement between lowered and raised positions relative thereto, said end portions when in lowered position combining with said central portion to define an elongated open-bottomed chamber within which airborne pulverulent material from said hopper will accumulate in sufficient concentration to effect a substantially uniform gravitational depositation through said open bottom, and means operable for securing said central portion to the hopper of a pulverulent distributor.

(21) 7. A spreader attachment for a pulverulent distributor of the type characterized by a hopper having a discharge port and impeller means for rendering airborne particles of material discharged through said discharge port, said attachment comprising a substantially U-shaped central portion dimensioned to enclose the discharge port and said impeller means, said central portion including front, top and rear walls, and a pair of U-shaped end portions each including front, top, rear and outer end walls, wherein the overall length dimension of each of said end portions approximates twice the length dimension of said central portion, a baffle member disposed in and transversely of each end portion about midway of its length for intercepting the passage of particles projected into said end portions which are too heavy to be airborne, said end portions hingedly secured to said central portion for movement between lowered and raised positions relative thereto, said end portions when in lowered position combining with said central portion to define an elongated open-bottomed chamber within which airborne pulverulent material from said hopper will accumulate on opposite sides of said baffles in sufficient concentration to effect a substantially uniform gravitational de-

positation through said open bottom, and means operable for securing said central portion to the hopper of a pulverulent distributor.

(22) 8. The method of evenly and uniformly distributing pulverulent material throughout an area up to five times the overall width of the body of a pulverulent distributor of the type characterized by a hopper having a discharge port and impeller means disposed there below for rendering airborne particles of material discharged thereon from said discharge port, which method comprises the step of enclosing the discharge port and impeller means within an inverted U-shaped housing so proportioned as to accumulate airborne pulverulent material in such concentration as to effect a substantially uniform gravitational depositation through its open bottom.

(23)
Application for United States Patent **SOLE**

Oath, Power of Attorney, and Petition

Being duly sworn, I, Aubrey Jones depose and say that I am a citizen of the United States of America residing at Strausburg, Illinois; that I have read the foregoing specification and claims and I verily believe I am the original, first, and sole inventor of the invention or discovery in Apparatus For and Method of Distributing Pulverulent Material described and claimed therein; that I do not know and do not believe that this invention was ever known or used before my invention or discovery thereof, or patented or described in any printed publication in any country before my invention or discovery thereof, or more than one year prior to this application, or in public use or on sale in the United States for more than one year prior to this application; that this invention or discovery has not been patented in any country foreign to the United States on an application filed by me or my legal representatives or assigns more than twelve months before this application; and that no application for patent on this invention or discovery has been filed by me or my representatives or assigns in any country foreign to the United States, except as follows:

And I hereby appoint J. Warren Kinney, Jr., 506 First National Bank Building, Cincinnati 2, Ohio, Registration No. 14,543, my attorney or agent with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent Office connected therewith.

Wherefore I pray that Letters Patent be granted to me for the invention or discovery described and claimed in the foregoing specification and claims, and I hereby subscribe my name to the foregoing specifications and claims, oath, power of attorney, and this petition, this 21st day of May, 1949.

Inventor Aubrey L. Jones.
Post Office Address Stewardsin, Illi.

State of Illi., County of Shelby, SS

Before me personally appeared Aubrey Jones, to me known to be the person described in the above application for patent, who signed the foregoing instrument in my presence, and made oath before me to the allegations set forth therein as being under oath, on the day and year aforesaid.

H. E. Fousty,
Notary Public.

(SEAL OF NOTARY)

95114

D. G. FIG. ......
CLASS .... SUB CLASS

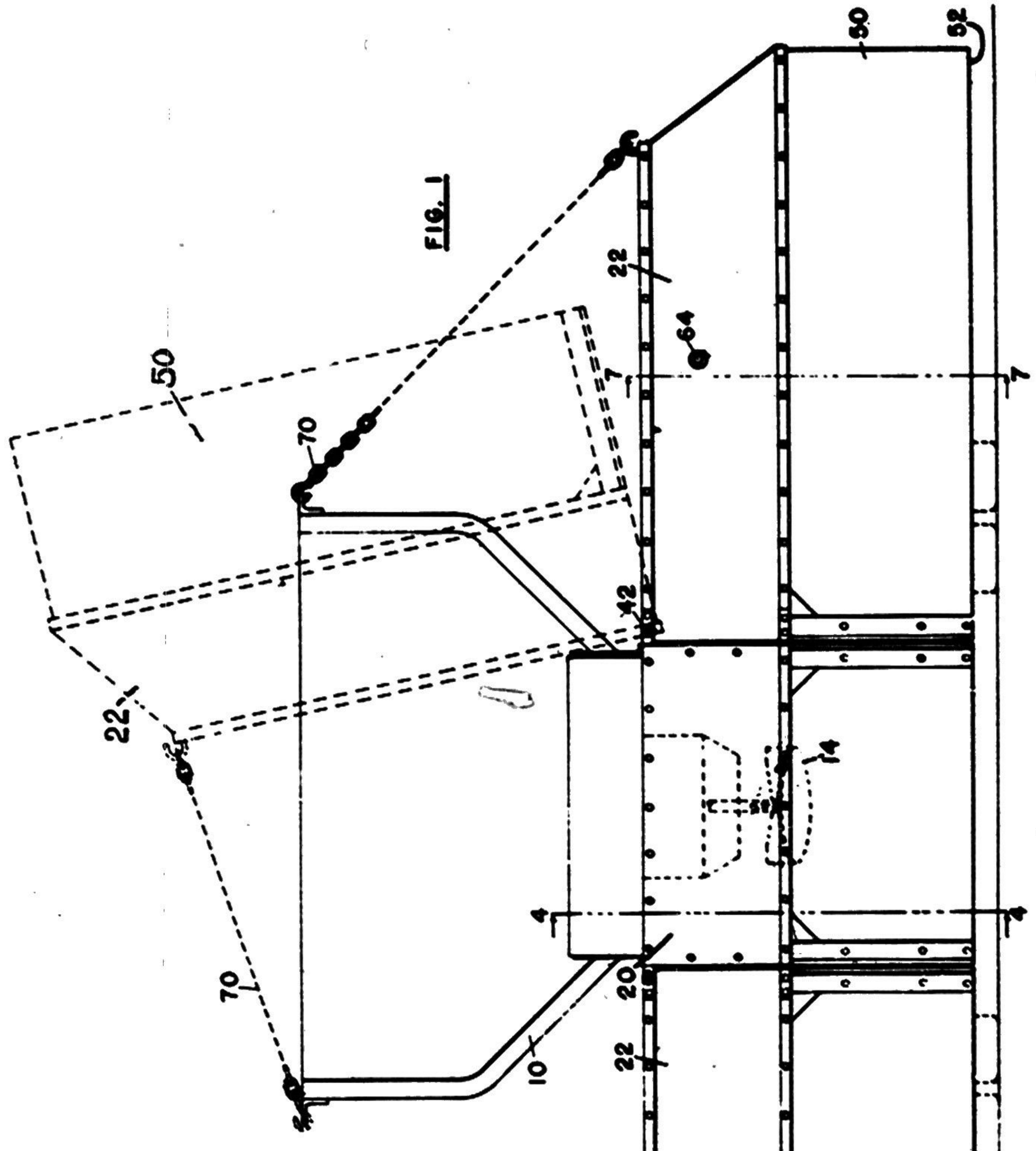

FIG. 1

INVENTOR.

AUBREY L JONES

BY

95114
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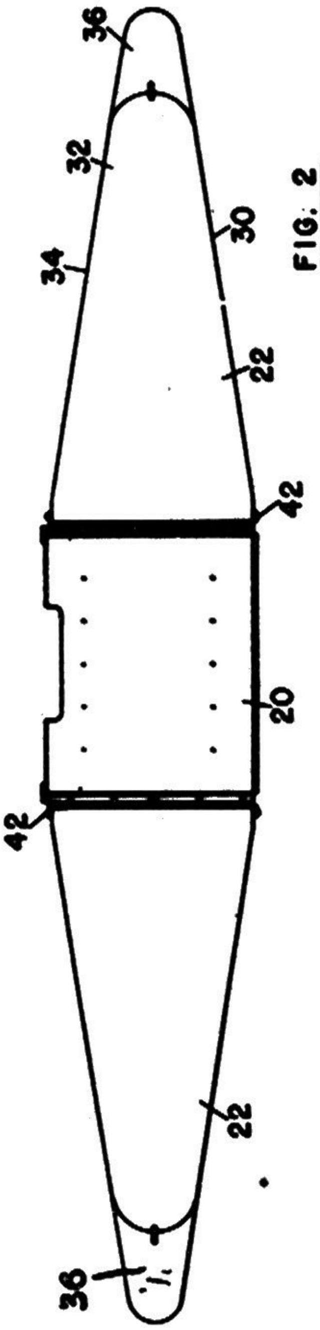

FIG. 2

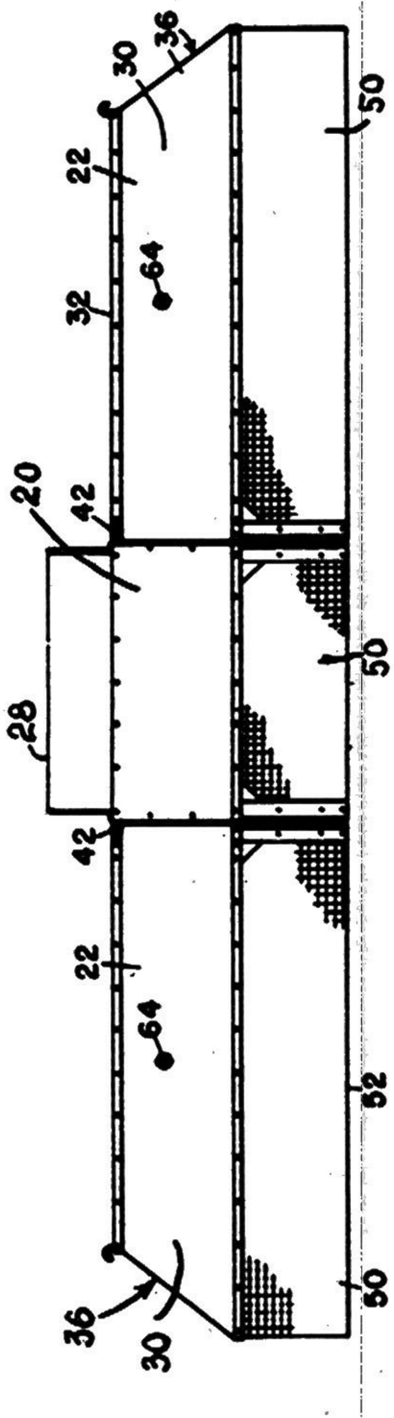

FIG. 3

INVENTOR.
AUBREY L. JONES

BY

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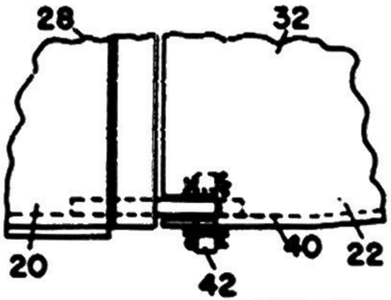

FIG. 5

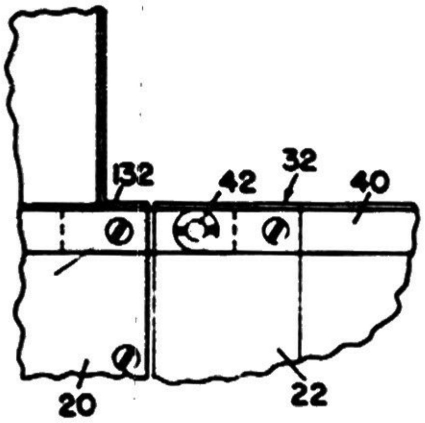

FIG. 6

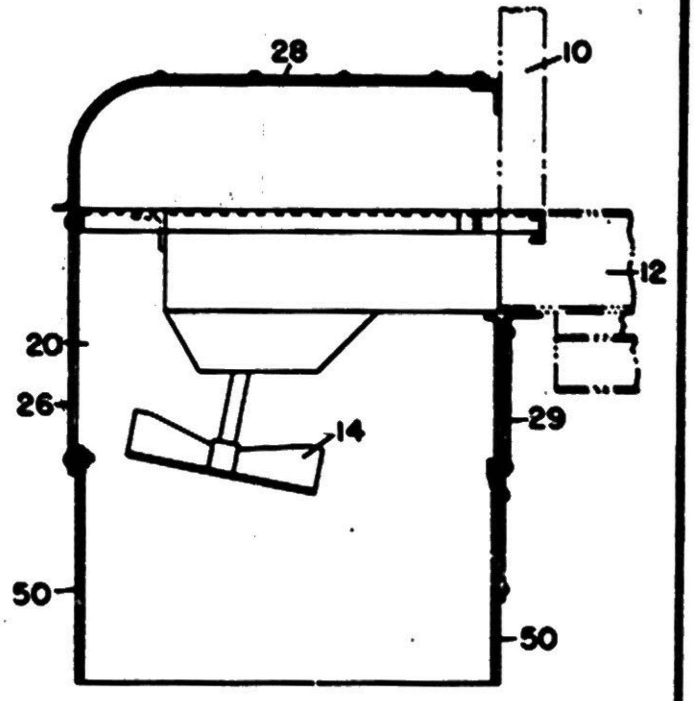

FIG. 4

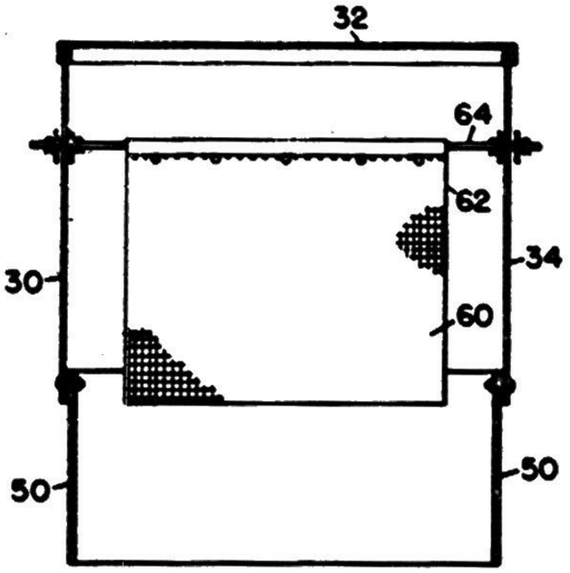

FIG. 7

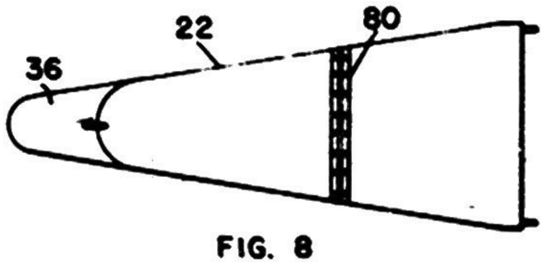

FIG. 8

INVENTOR.

AUBREY L. JONES

BY Johnson Kinney, Jr.

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(47)

OFFICIAL LETTER — OCT. 5, 1949

References made of record:

Kefauver	772,941	Oct. 25, 1904	275-7
Tuttle	896,178	Aug. 18, 1908	275-2H
Campbell	1,616,303	Feb. 1, 1927	275-8xr
Litchfield et al	1,668,516	May 1, 1928	275-1
Baughman	2,120,169	June 7, 1938	275-8
Richey	2,350,476	June 6, 1944	275-2a 11

Action is given on this application at this time by direction of the Commissioner of patents.

The following formal corrections should be made:

Page 7, line 7, "wasy" should be **way**; in line 18, after "impeller", the comma should be changed to a semicolon.

Page 8, line 7, "front" and "rear" before "wall" should be reversed, relative to the vehicle; that is, the **front** wall should be 29 and the **rear** wall 26. In line 11, "spread" should be **spreader.** In line 13, after "4", the comma should be changed to a semicolon.

Page 9, line 2, "are" should be **is.** Line 3, "include" should be **includes,** and "front" and "rear" should be reversed.

Page 10, line 6, after "portion", the comma should be changed to a semicolon.

Page 13, line 16, "phenomena" should be **phenomenon.**

In line 13, on page 13, **to** has been inserted after "thru", which should be **through.**

(48) In line 19 on page 14 "hing" has been changed to **hinged.**

On page 14, that portion from the period in line 5 to the end of the paragraph is laudatory and has no proper place in the specification and should be canceled. Such information has no direct bearing on the disclosure and is argumentative, not to say derogatory, in nature.

Fig. 3 of the drawing is improper in that it fails to show the rear and top walls as would appear in rear end view. The parts marked 50 and 52 indicating the depending apron should be the rear wall 30 without the mesh work. If the apron be shown, it should depend from the lower edge of the rear wall 30. As shown, the wall indicated 30 appears as the top wall which is inaccurate. Applicant should submit an additional sketch in ink indicating the necessary correction to be made, together with a separate letter to the Office Draftsman requesting that such proposed change be made subject to approval by the Examiner, and at applicant's expense.

The references made of record are pertinent to various features of the disclosure and are cited for applicant's information. While no individual reference shows the general combination, many of the claims also fail to recite sufficient structure to avoid the references, which are applied to such claims as follows:

Claims 4, 6, while directed to novel subject matter, are rejected for lack of proper form. In line 11 of claim 4, "their" should be **its**, and in line 12 "ends" should be **end.** It will be noted that the word "each" in line 10 is singular and what follows relates to but a single wing structure. Similarly, in line 12 of (49) claim 6, "portions taper" should be **portion tapers;** in lines 13 and 15, "their" should be **its;** and in lines 14 and 15, "ends" should be **end.**

Claim 8 is rejected as failing to define any true method, but merely the obvious function of the machine or apparatus on which it relies in part. Applicant has failed to suggest any other apparatus or means whereby the method could be carried out and no legitimate basis to support such possibility is found. In this connection see: In re Ernst, 449 O. G. 507; 1934 C. D. 595. In re Fessenden, 226 O. G. 1081; 1916 C. D. 172. Ex Parte Foreman, 326 O. G. 684; 1924 C. D. 47.

Claim 9, line 2, **port** should be inserted after "discharge". This claim and dependent claim 10 are rejected as being functional and incomplete, in that the "open bottom" is not enough to leave to the imagination the construction of the top and wall portions and their relationship.

Claims 9 and 10 are further rejected as failing to patentably distinguish from Tuttle or Litchfield et al taken with Richey, in view of the depending canvas skirt or rear wall for the hood 19 in Kefauver or the open bottom hood 23 in Campbell. Tuttle shows hinged end hoppers 19, 21 or dispensing troughs arranged at opposite ends of a central portion 20. See Figs. 3 and 4. Litchfield et al shows a single tubular member 14 similarly hinged. No invention would be involved merely in providing a similar trough at the opposite end of the central portion; nor would there be invention merely in providing an open-bottom shield as in Campbell or a flexible apron as proposed by Kefauver.

(50) Claims 11 and 12 are rejected as being directed to subject matter not fully disclosed. Although the "conveyor means" is conventional, all elements positively claimed must be fully disclosed in the specification and drawing.

Claims 11 and 12 are further rejected as functional and incomplete, since "movable parts" and "an open bottom" fail to define the structure with sufficient distinctness as required by Section 4888, Revised Statutes.

Claims 11 and 12 are further rejected as failing to patentably distinguish from the references as applied above to claims 9 and 10.

Claims 13, 14 and 15 are likewise rejected as being functional and indefinite and as failing to define the device structurally as required by Sec. 4888, R. S. Claims 14 and 15 improperly repeat "movable elements" and "side elements".

Claims 9-15 are still further rejected on the ground of undue multiplicity —.

Claims 1, 2, 3, 5 and 7 appear allowable, as at present advised.

Claims 4 and 6 may also be allowed when amended as suggested.

Claims 4, 6, 8 and 9 to 15 stand rejected.

A single additional claim embodying the specific features of Fig. 8 may be favorably considered if otherwise complete and definite.

Examiner

L/dh

(51) AMENDMENT DATED, OCTOBER 6, 1949

Sir:

This is in response to Official Letter dated October 5, 1949.

Please change the title from "APPARATUS AND METHOD OF DISTRIBUTING PULVERULENT MATERIAL" to "APPARATUS FOR DISTRIBUTING PULVERULENT MATERIAL".

Please amend the specification as follows:

Page 7, line 7, change "wasy" to **way**; line 18, after "impeller" change the coma to a semi-colon.

Page 8, line 7, change "front" to **rear**; change "rear" to **front**; line 11, change "spread" to **spreader**; line 13 after the numeral 4, change the comma to a semi-colon.

Page 9, line 2, change "are" to **is**; line 3 change "include" to **includes**; change "front" to **rear**; change "rear" to **front**.

(52) Page 10, line 6, after "portion" change the comma to a semi-colon.

Page 13, line 13, change "thru" to **through**; line 16, change "phenomena" to **phenomenon**.

Page 14, line 5, please cancel "by way of example, in a recent". Please cancel lines 6 through 17 in their entirety. Line 23, please add the following: **In those instances when end portions 22 have been subdivided by means of hinges 80, those portions between hinges 42 and 80 may be considered as intermediate end portions, whereas those portions beyond hinges 80 may be considered as outer end portions. It being further understood that the intermediate end portions are substantially U-shaped comprising front, top and rear walls, and that the outer end portions are likewise substantially U-shaped, including front, top, rear and outer end walls.**

Claim 4, line 11, change "their" to **its.** Line 12, change "ends" to **end.**

Claim 6, line 12, change "portions taper" to **portion tapers.** Line 13, change "their" to **its.** Line 14, change "ends" to **end.** Line 15, change "their" to **its;** change "ends" to **end.**

Please cancel Claims 8, 9, 10, 11, 12, 13, 14, 15.

Please add the following new claims:

16. A spreader attachment for a pulverulent distributor of the type characterized by a hopper having a discharge port and impeller means for rendering airborne particles of material discharged through said discharge port, said (53) attachment comprising a substantially U shaped central portion dimensioned to enclose the discharge port and said impeller means, said central portion including front, top and rear walls, means operable for securing said central portion to the hopper of a pulverulent distributor, a pair of U-shaped intermediate end portions each including front, top and rear walls, and a pair of U-shaped outer end portions each including front, top, rear and outer end walls, said intermediate end portions hingedly secured to said central portion for movement between lowered and raised positions relative thereto, each outer portion hingedly secured to an intermediate end portion for movement between raised and lowered positions relative thereto, said intermediate and outer end portions when in lowered position combining with said central portion to define an elongated open-bottomed chamber within which airborne pulverulent material from said hopper will accumulate in sufficient concentration to effect a substantially uniform gravitational depositation through said open bottom said outer end portions foldable upwardly over their respective intermediate end portions and said intermediate end portions foldable upwardly toward each other and above said central portion for disposing said intermediate and outer end portions in compact, raised, inoperative relationship.

(54) 17. A spreader attachment for a pulverulent distributor of the type characterized by a hopper having a discharge port and impeller means for rendering airborne particles of material discharged through said discharge port said attachment comprising a substantially U-shaped central portion dimensioned to enclose the discharge port and said impeller means, said central portion including front, top and rear walls, and a pair of U-shaped end portions each including front, top, rear and outer end walls, said end portions secured to said central portion for combining with said central portion to define an elongated open-bottomed chamber within which airborne pulverulent material from said hopper will accumulate in sufficient concentration to effect a substantially uniform gravitational depositation through said open bottom, and means operable for securing said central portion to the hopper of the pulverulent distributor.

REMARKS

Claims 4 and 6 have been amended as suggested by the Examiner, wherefore it is believed that these claims, as presently submitted, are allowable.

Method Claim 8 has been cancelled.

Claims 9 through 15 have been cancelled wherein the subject matter of these claims has been incorporated into (55) newly presented Claim 16 in such a way, however, as to clearly avoid the references.

Newly presented Claim 16 is built around allowed Claim 1 in such a manner as to be directed to the specific features disclosed in Fig. 8, note particularly lines 10 to 30. Favorable consideration and allowance of Claim 16 is respectfully requested.

Newly presented Claim 17 is similar to and based upon allowed Claim 1, from which it differs in that the U-shaped end portions called for in lines 8 to 11 are referred to as being "secured" to the central portion whereby to comprehend a spreader attachment having end portions secured to a central portion (satisfying the specific terminology found in lines 5 to 8) by means other than a pivotal connection, and comprehending a fixed connection therewith.

Favorable consideration and allowance of newly presented Claim 17 is respectfully requested.

With reference now to the comments concerning Fig. 3 of the drawing, applicant's attorney, through his Washington associate, will interview the Examiner for reaching an understanding with reference to Fig. 3.

Favorable consideration and formal allowance of Claims 1 through 7, 16 and 17, is respectfully requested.

Respectfully,

. . . .

Attorney for Aubrey L. Jones

(64)

OFFICIAL LETTER DATED DEC. 13, 1949

Responsive to amendment filed Nov. 22, 1949.

Additional references made of record:

McDow	1,770,707	July 15, 1930	275-8
Allgrunn	2,204,099	June 11, 1940	43-148
Wilson	2,307,313	Jan. 5, 1943	275-2A10
Johnson	584,809	Jan. 23, 1947	275-8

(Great Britain) (2 sheets drawing - 8 pages specification)

In view of the recently discovered British patent to Johnson (584,809), no interference will be declared at the present time.

The other added references disclose pertinent features, particularly that of a depending fabric wind guard, while Allgrunn also shows an articulated boom structure extending transversely from each side of the vehicle, Fig. 3, showing a depending fabric apron 44, the booms being foldable for transport of the vehicle through narrow openings and along a roadway.

Attention is also called to the reference patent to Tuttle, of record, which shows hinged seed boxes foldable on the vehicle for transport— see Fig. 4, and Litchfield et al, of record, showing hinged member 36.

On further consideration, claims 1-6 and 16-22 are rejected as failing to patentably distinguish from the references now made of record. The British patent to Johnson is considered fully anticipatory of the basic concept, while such secondary (65) details as the depending fabric aprons in such general combinations serving as wind guards or shields are shown to be somewhat common practice by the references to Allgrunn, Wilson and McDow, Allgrunn showing such depending apron 44

(Fig. 3) attached to an articulated transversely disposed seed boom. Litchfield et al, of record, not only shows hinged or articulated transversely disposed fertilizer spreaders 13, 14, but also an end member 36 hinged to the outer end of trough 14. The obvious modification of the Johnson device by providing a depending apron from the lower edges of the shields or shrouds 48 as in Allgrunn or Wilson, and the addition of second foldable shroud hinged to the outer ends of shrouds 48 in view of Litchfield et al and Tuttle is not deemed to involve invention, but merely the expected skill of a mechanic familiar with the art. No patentable significance is attached to the outwardly tapering form of the transverse sections, since this is an obvious expedient involving problems of mechanical design. The tapering would naturally suggest itself as providing rigidity near the center of the vehicle with a desirable diminution of excess weight at the outer ends. The baffle 70 is adjustable and may be vertical if desired to close the outer ends of the shrouds 48.

The above references are applied to the individual claims as follows:

Claims 1, 3, 4, 5, 6 and 17 are considered unpatentable over Johnson for reasons stated above. Claim 1 is fully met; the others are substantially met because the dimensions of the lateral extensions are obviously features of design. Johnson shows a central portion open at the bottom having a narrow flat top and sloping rear side wall which incloses the (66) outlet 21 and rotary distributors 33, 34, 35, as indicated in Figs. 1, 2, 3 and 5. This hood or shroud is considered the full equivalent of a U-shaped shroud which is apparently hinged near the upper end (Fig. 1).

Claims 2, 18, 19 and 20 are considered unpatentable over Johnson in view of the fabric depending aprons shown by Allgrunn, and Wilson, and the rotary blades 26 in McDow or disk 21 in Baughman of record.

Claims 16, 21 and 22 are considered unpatentable over Wilson in view of the hinged foldable outer end member 36 in Litchfield et al, also the foldable seed boxes in Tuttle. To add another similar or tapering shroud at the outer ends of the shrouds 48 in Johnson, as suggested at 36 in Litchfield et al, and foldable on themselves as suggested in Tuttle is deemed to involve more mechanical skill.

In support of the foregoing rejections attention is invited to the following decisions:

In re Landrock et al, 624 O.G. 663; and, In re Horney, 161 F. (2nd) 271; 73 U.S.P.Q. 293.

Claims 1-6 and 16-22 stand rejected.

Claim 7 may be allowed as at present advised.

L:ms

Examiner

(67) AMENDMENT FILED JUNE 10, 1950

Hon. Commissioner of Patents
Washington, D.C.

SIR:

In response to the Official action of December 13, 1949, kindly amend this application as follows:

Claim 1, line 3, after "and" insert — substantially horizontally disposed rotatable —; same line, after "means" insert —carried by a substantially vertically disposed shaft —; line 5, cancel "substantially U-shaped"; line 8, cancel "U-shaped"; line 13, after "elongated" insert — unobstructed —; line 14, cancel "airborne" and insert — chamber —; line 15, before "will" insert — is rendered airborne due to rotation of the said impeller means and —; line 17, after "bottom" insert — without any appreciable blow away of the material and thus effect a uniform application of the material on the ground —; same line, cancel "and" and also cancel "operable"; line 18, after "distributor" insert —, and means for rotating the impeller shaft —.

(68) Claim 2, line 3, after "and" insert — rotatable —; line 4, after "port" insert — and means for rotating the impeller means —; line 5, cancel "substantially U-shaped"; line 8, cancel "U-shaped"; line 12, after "between" insert — vertical — ; line 15, cancel "airborne" and insert — chamber —; line 16, after "hopper" insert — is rendered airborne due to rotation of said impeller means and —; line 18, after "bottom" insert — without any appreciable blow away of the material and thus effect a uniform application of the material on the ground —; same line, cancel "operable"; line 20, after "means" insert — surrounding, attached to and —; line 23, after "material" insert — closely —.

Claim 3, line 3, after "and insert — rotatable —; line 4, after "port" insert — and means for rotating the impeller means —; line 5, cancel "substantially U-shaped"; line 8, cancel "U-shaped"; line 12, cancel "at their top"; line 13, cancel "walls"; same line, after "between" insert — vertical —; line 17, cancel "airborne" and insert — chamber —; same line, cancel "will"; line 18, before "accumulate" insert — is rendered airborne due to rotation of said impeller means and will —; line 20, after "bottom" insert — without any appreciable blow away of the material and thus effect a uniform application of the material on the ground —; and in this same line, cancel "operable".

Claim 4, line 4, after "port" insert — and means for rotating the impeller means —; line 5, cancel "substantially U-shaped"; line 8, cancel "U-shaped"; (69) line 13, after "between" insert — vertical —; line 16, cancel "air—" and insert — chamber —; line 17, cancel "borne"; and in this same line, after "hopper" insert — is rendered airborne due to rotation of the impeller means and —; line 19, after "bottom" insert — without any appreciable blow away of the material and thus effect a uniform application of the material on the ground —; line 20, cancel "operable"; line 21, cancel "a" and insert — the —.

Claim 5, line 3, after "and" insert — rotatable —; line 4, after "port" insert — and means for rotating the impeller means —; line 5, cancel "substantially U-shaped"; line 8, cancel "U-shaped"; line 15, after "between" insert — vertical —; line 19, cancel "airborne" and insert — chamber —; line 20, after "hopper" insert — is rendered airborne due to the rotation of the impeller means and —; line 22, after "bottom" insert — without any appreciable blow away of the material and thus effect a uniform application of the material on the ground —; and in this same line, cancel "operable"; line 23, cancel "a" and insert — the —.

Claim 6, line 3, after "and" insert — rotatable —; line 4, after "port" insert — and means for rotating the impeller means —; line 5, cancel "substantially U-shaped"; line 8, cancel "U-shaped"; line 17, after "between" insert — vertical —; line 20, cancel "airborne" and insert — chamber —; line 21, after "hopper" insert — is rendered airborne due to rotation of the impeller means and —; line 23, after "bottom" (70) insert — without any appreciable blow away of the material and thus effect a uniform application of the material on the ground—; line 24, cancel "operable"; line 25, cancel "a" and insert — the —.

Claim 16, line 3, after "and" insert — rotatable —; line 4, after "port" insert — and means for rotating the impeller means —; line 5, cancel "substantially U-shaped"; line 10, cancel "U-shaped"; line 12, cancel "and"; line 22, cancel "airborne" and insert — chamber —; line 23, before "will" insert — is rendered airborne due to rotation of said impeller means and —; line 25, after "bottom" insert — without any appreciable blow away of the material and thus effect a uniform application of the material on the ground —; same line, before "said" insert — and —.

Claim 17, line 3, after "and" insert — rotatable —; line 4, after "port" insert — and means for rotating the impeller means —; line 12, cancel "airborne" and insert — chamber —; line 13, after "hopper" insert — is rendered airborne due to rotation of said impeller means and —; line 15, after "bottom" insert — without any appreciable blow away of the material and thus effect a uniform application of the material on the ground —; line 16, cancel "operable"; line 17, cancel "a" and insert — the —.

Claim 20, line 4, after "thereof" insert — and means for rotating the distributor disk —; line 6, before "distributor" insert — rotatable—.

(71) Claim 21, line 4, after "thereof" insert—and means for rotating the disk —; and in line 6, before "material" insert — rotatable —.

Insert the following claims:

23. A pulverulent spreader attachment for a distributor including a hopper having a discharge port, a substantially horizontally disposed rotatable impeller means associated therewith and means for rotating the impeller; said attachment comprising a central portion dimensioned to enclose the discharge port and said impeller means, said central portion including front, top and rear walls, a pair of elongated end portions each including front, top, rear and outer end walls, said end portions hingedly secured on a substantially horizontal axis to and extending laterally from opposite sides of the said central portion for substantially vertical movement between lowered operative and raised inoperative positions relative thereto, said end portions when in lowered position combining with said central portion to define a hollow elongated unobstructed open-

bottomed chamber, the material that is introduced into the central portion of the chamber from the hopper port being rendered airborne by said impeller means and effecting a uniform distribution of the airborne material therein and also effecting a uniform distribution of the airborne material in each of the said end portions of the chamber, so that the airborne material will accumulate in and fill all of the interior portions of the said chamber in sufficient concentration to effect a substantially uniform discharge of the said material through the entire unobstructed open-bottomed area of the said chamber and thus continuously effect a substantially uniform application of the airborne material on the ground without any appreciable blow away of the material.

(72) 24. A pulverulent spreader attachment for a distributor including a hopper having a discharge port, a substantially horizontally disposed rotatable impeller means associated therewith and means for rotating the impeller; said attachment comprising a central portion dimensioned to enclose the discharge port and said impeller means, said central portion including front, top and rear walls a pair of elongated end portions each including front, top, rear and outer end walls, said end portions consisting of a plurality of horizontally aligned sections hingedly connected together with one of the sections hingedly secured on a substantially horizontal axis to and extending laterally from opposite sides of the said central portion for substantially vertical movement between lowered operative and raised inoperative positions relative thereto and when in raised position the said sections will fold upon themselves, said end portions when in lowered position combining with said central portion to define a hollow elongated unobstructed open-bottomed chamber, the material that is introduced into the central portion of the chamber from the hopper port being rendered airborne

by said impeller means and effecting a uniform distribution of the airborne material therein and also effecting a uniform distribution of the airborne material in each of the said end portions of the chamber, so that the airborne material will accumulate in and fill all of the interior portions of the said chamber in sufficient concentration to effect a substantially uniform discharge of the said material through the entire unobstructed open-bottomed area of the said chamber and thus continuously effect a substantially uniform application of the airborne material on the ground without any appreciable blow away of the material.

(73) 25. A pulverulent spreader attachment as defined in and by Claim 23 wherein a flexible means surrounds and is attached to and depends from the lower perimeter of the said central and end portions for increasing the effective volume of said chamber and locating the discharge zone of pulverulent material closely adjacent the ground.

26. A pulverulent spreader attachment as defined in and by Claim 23 wherein the said pair of elongated end portions that are hingedly secured at opposite sides of the central portion are in the form of hingedly connected together sections.

27. A pulverulent spreader attachment as defined in and by Claim 23 wherein a flexible means surrounds and is attached to and depends from the lower perimeter of the said central and end portions for increasing the effective volume of said chamber and locating the discharge zone of pulverulent material closely adjacent the ground, and wherein the said pair of elongated end portions that are hingedly secured at opposite sides of the central portion are in the form of hingedly connected together sections.

28. A pulverulent spreader attachment as defined in and by Claim 24 wherein a flexible means surrounds and is attached to and depends from the lower perimeter of

the said central and end portions for increasing the effective volume of said chamber and locating the discharge zone of pulverulent material closely adjacent the ground.
(74)

REMARKS

The Primary and Assistant Examiners will recall a conference with applicant's counsel. During the course of that conference, a claim of substantially the same scope as claim 23 embodied in this amendment was discussed. There was no commitment by the examiner as to patentability or allowability of the said claim 23 but it was the understanding between the examiner and applicant's counsel that the examiner would give careful study and consideration to this claim 23. Incidentally, it is submitted that, for reasons hereinafter set forth, claim 23 is clearly patentable and allowable along with the other claims specifically discussed and referred to hereinafter.

The invention as embodied in this application is now in use and is commercially practicable and successful. As a matter of fact, a large manufacturer of lime and other similar spreaders, namely, the Anthony Company of Streator, Illinois, is a licensee of the present applicant with regard to the invention as embodied in this application.

A circular of the Anthony Company No. PS1-84915, is attached hereto and, from the same, it will be seen that the invention as embodied in this application is in commercial use and has been found to be highly satisfactory in all respects. The several cuts on the circular indicate the operative and inoperative positions of the spreader that is attached to the rear part of a vehicle. In the upper right hand corner, there is a clear disclosure (75) of the very effective and substantially uniform spreading of the pulverulent material. Below this cut in the upper right hand corner, the laterally extending sections of the spreader are in elevated or inoperative position and the curtain or flexible means that surrounds the perimeter of the chamber as a whole is in a rolled up or compacted condition. From the cut shown in the upper right hand corner of the circular, it will be noted that there is no appreciable blow away of the pulverulent material that is being deposited on the ground. There is no question about the commercial success of applicant's invention and, if desired, additional proof and evidence in this respect will be placed of record.

In view of a most careful study of the present application, and a most careful study of all of the patents of record in this application, and additionally, the patent to Stoltzfus, 2,281,212, April 28, 1942, Material Spreader, which is hereby made of record, which was called to the examiner's attention during the aforesaid interview, it is submitted that there is undoubtedly no one reference or a basic reference with which other references may be combined that meets or anticipates any and all of the claims in the application.

The very fact that a large manufacturer of lime spreaders who is familiar with most of the commercial lime spreaders available on the market and, through its attorneys is also familiar with all of the art of record in this case, recognizes invention in this present application, it should therefore follow that invention should also be recognized by the Patent Office. In other words, (76) it may be considered that the Anthony Company and its attorneys are experts, and having made lime spreaders of various types for a number of years and knowing about the prior art and the prior lime spreaders on the market, it certainly did not occur to the Anthony Company and its technicians to invent a pulverulent material spreader or distributor as embodied in the present application. It would seem that, if it is so obvious to arrive at applicant's invention, as by combining the patents as suggested in the

the said central and end portions for increasing the effective volume of said chamber and locating the discharge zone of pulverulent material closely adjacent the ground.

(74)

REMARKS

The Primary and Assistant Examiners will recall a conference with applicant's counsel. During the course of that conference, a claim of substantially the same scope as claim 23 embodied in this amendment was discussed. There was no commitment by the examiner as to patentability or allowability of the said claim 23 but it was the understanding between the examiner and applicant's counsel that the examiner would give careful study and consideration to this claim 23. Incidentally, it is submitted that, for reasons hereinafter set forth, claim 23 is clearly patentable and allowable along with the other claims specifically discussed and referred to hereinafter.

The invention as embodied in this application is now in use and is commercially practicable and successful. As a matter of fact, a large manufacturer of lime and other similar spreaders, namely, the Anthony Company of Streator, Illinois, is a licensee of the present applicant with regard to the invention as embodied in this application.

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In view of a most careful study of the present application, and a most careful study of all of the patents of record in this application, and additionally, the patent to Stoltzfus, 2,281,212, April 28, 1942, Material Spreader, which is hereby made of record, which was called to the examiner's attention during the aforesaid interview, it is submitted that there is undoubtedly no one reference or a basic reference with which other references may be combined that meets or anticipates any and all of the claims in the application.

The very fact that a large manufacturer of lime spreaders who is familiar with most of the commercial lime spreaders available on the market and, through its attorneys is also familiar with all of the art of record in this case, recognizes invention in this present application, it should therefore follow that invention should also be recognized by the Patent Office. In other words, (76) it may be considered that the Anthony Company and its attorneys are experts, and having made lime spreaders of various types for a number of years and knowing about the prior art and the prior lime spreaders on the market, it certainly did not occur to the Anthony Company and its technicians to invent a pulverulent material spreader or distributor as embodied in the present application. It would seem that, if it is so obvious to arrive at applicant's invention, as by combining the patents as suggested in the

Official action of December 13, 1949, then, certainly, the experts in the field would have done this long before applicant. Under the circumstances, therefore, it would appear that it is not proper to combine the references as suggested in the said Official action and, moreover, it is proven hereinafter that, even if these patents were combined as suggested in the Official action, applicant's invention is not attained. While on this subject, it is submitted that there is no suggestion among the patentees of the patents relied upon for rejection to combine their various structures with one another so that the same would result in what applicant has invented. To the contrary, there is no suggestion in this regard whatsoever.

It seems that what has happened here is that, after the Office has become thoroughly familiar with and versed with applicant's invention, it is applying the teaching of applicant's invention in the art that preceded same and, of course, this is not permissible. Had it not been for applicant's invention or knowledge of applicant's invention, it is further submitted that it undoubtedly never would have entered the examiner's mind to so combine (77) the patents in the prior art as is proposed that they be combined in the said Official action.

It is conscientiously believed that applicant has produced a highly meritorious and known successful invention and, in doing so, applicant has brought together certain component elements and devices in a novel arrangement and disposition which has resulted in an entirely new combination and, in this connection with respect to allowability or rather patentability of a combination claim, attention is directed to the rather recent decision by the Court of Customs and Patent Appeals in re Camp No. 5352, Decided January 6, 1948 (F. 2d; 76 USPQ 309) in which it was stated:

> "Where the rejection was based solely on the ground of old combination, and the references singly or in combination, did not disclose or suggest the actual structure recited in the appealed claims, and where it appears that there is a definite coaction between the elements recited, HELD that appellant has produced a new combination not disclosed by the prior art, involving invention."

This decision is directly in point as regards the present applicant; namely, to the effect that the present applicant has indeed produced a new combination and is entitled to the allowance of claims as such.

A brief history of what has happened in this application is that, in the first Official action, claims 1, 2, 3, 5 and 7 were allowed and claims 4 and 6 were indicated allowable if slightly amended. In the second Official action, claims 1 through 7, 16 and 17 were allowed and claims 18, 19, 20 and 21 were suggested for purposes of interference. In the third Official action, claim 22 was suggested for purposes of interference. In the last Official action, all of the aforesaid allowed claims (78) and those that were indicated allowance and the claims that were suggested for purpose of interference were rejected except the specific claim 7.

Notwithstanding the rejection, and for reasons hereinafter set forth, it is submitted that all of the claims now in this application are clearly patentable.

A good many of the claims in the application have been amended primarily to render them more complete and definite and to place them in better form generally.

Claims 1 through 6 inclusive and 16 through 22, both inclusive, stand rejected as failing to patentably distinguish from the references now made of record; namely, the references in the Official action of December 13, 1949.

In rejecting the aforesaid groups of claims, it appears that the examiner is relying on the British patent to Johnson, 584,809 as his basic reference.

In the first place, the Johnson spreader for fertilizer and the like could not possibly be used for a fine pulverulent material such as is adapted to be spread by applicant's spreader. Note, in Figs. 1, 2 and 5 of the Johnson patent, the distance that the bottom edges of the so-called shrouds 48 are from the level of the ground surface. If a finely pulverulent material were discharged by the Johnson spreader, the majority of the said material would be blown away and would not be applied to the surface of the ground. This pulverulent material that applicant discharges and spreads substantially uniformly over the ground surface is very light and can be rendered airborne and, (79) therefore, must be deposited closely adjacent the ground surface otherwise the effectiveness of the dsicharge will be totally destroyed or eliminated such will happen in Johnson. Johnson does show the two laterally extending pivotally mounted shrouds 48 being pivoted to opposite sides of a central portion as at 68. The central portion of the Johnson fertilizer distributor includes in the upper part of the central section thereof feed hoppers 44, there being two such hoppers in the upper portion of the central section, and these hoppers are each provided with the downwardly diverging wall members 45 and 46 which are spaced apart at their lower ends by a gap 47 and this gap of each of the hoppers in the upper part of the central section is disposed directly above the so-called rotatable impact members 33 and 34, one of which rotates in a clock-wise direction and the other in an anti clock-wise direction on substantially horizontally disposed shafts and which impact members are in the lower part of the central portion of the spreader. In addition, Johnson utilizes, between the impact members 33 and 34, another impact member 35 and, with regard to this impact member 35, here is what Johnson states in his specification:

> "Between these two areas is a third area immediately below the machine, which is not spread, or is only insufficiently spread, with fertilizer by the two impact members 33, 34 and it is this third area which is taken care of by the third (supplementary) impact member 35 which operates therefore simultaneously with the two main impact members 33, 34 to spread the fertilizer over the third area thereby completing the full area of spread of the machine or rendering said area uniform from side to side thereof."

(80) Additionally, Johnson, in his specification states:

> "The two impact members 33, 34 generate a current of air by their rotation which becomes projected along with the stream of fertilizer along the corresponding shroud 48 and according to the modification illustrated in Fig. 7, a part of the air to form this current is drawn into the impact member axially thereof by way of inlet opening 72 in the end plate 36 of the distributor unit and co-registering inlet opening 73 in the end disk 40 of the impact members. In this way, the impact member is enabled to act as a centrifugal fan drawing in air along an axial path and delivering along a tangential path, the current of air thus projected along the shroud carrying with it at least the finer particles of the stream of fertilizer."

It is submitted, as aforesaid, that this Johnson British patent, 584,809, is lacking as a basic reference. As already stated, it cannot possibly effectively and properly spread finely divided or pulverulent material because of the arrangement of the structural features as quoted supra from this patent. The central portion of the device is completely obstructed by the hopper walls 45 and 46 in the upper portion thereof and the centrifugal impact fans 33 and 34 in the lower portion thereof not to mention the additional impact member 35. Johnson, by his own admission in his specification, states that the additional impact member 35 is necessary and that only some of the lighter particles of the fertilizer will be projected by the rotatable impact members 33 and 34. Moreover, this Johnson fertilizer distributor, by his own admission, is of the impact type where the rotation of the impact members project the fertilizer that is to be distributed. This is indeed an entirely different proposition from applicant's rotatable distributor which is not of the impact type but, to the contrary, is of the type that, when the pulverulent material is discharged thereon, and due to rotation of (81) the distributor, the material, rather than being projected as in Johnson, is actually rendered airborne within the complete chamber and not only a portion thereof which, it is believed, will be the case in the Johnson spreader. Additionally, the pulverulent material that is rendered airborne in applicant's distributor, is uniformly distributed throughout the entire chamber and is accumulated and concentrated in this said chamber and substantially uniformly applied directly on the ground without any appreciable blow away of the pulverulent material. Johnson has an entirely different conception of spreader than that embodied in applicant's invention and it is again reiterated that Johnson fails as a basic reference. So, the statement in the Official action that "The British patent to Johnson is considered fully anticipatory of the basic concept, . . ." is not believed well taken, supported by the Johnson disclosure or in order. As Johnson fails as a basic reference, it is clear, therefore, that the combination of the other patents along with Johnson is not proper.

The patents to Allgrunn, 2,204,099, June 11, 1940; Wilson, 2,307,313, January 5, 1943 and McDow, 1,770,707, July 15, 1930, have been cited as secondary references showing the wind guards or shields.

The Allgrunn device is for a dusting apparatus of the blower type. This Allgrunn patent does disclose a curtain 44 and here is what the patentee says about this curtain in his specification, second column, page 2 thereof starting with line 16 and ending at line 24:

(82)

> "A curtain 44 made of proper-weight fabric is intended to be trailed or drawn in back of the distributing boom portion of this dusting apparatus during the time insecticides are being discharged from the tube sections 34 and 40. This curtain preferably is to be slightly wider than the over-all width of the distributing boom and should extend approximately one-hundred feet rearwardly of the distributing boom."

Applicant's curtain 50, as clearly seen in the drawings and described in his specification, is attached to the perimeter of the distributing chamber at one edge and the bottom edge of this curtain in all instances is disposed above the ground when the pulverulent material is being discharged. In no instance does applicant's curtain 50 trail or is drawn in back of the machine like the curtain 44 is drawn in back of the Allgrunn machine. In other words, the curtain 44 in the Allgrunn machine, as stated in the specification of his patent, extends approximately one hundred feet rearwardly of the distributing boom and, therefore, must necessarily contact the surface of the ground or whatever is growing from the ground. A curtain that is drawn on the ground would defeat applicant's purpose and this is what would happen if the Allgrunn curtain were substituted either for applicant's invention or the Johnson invention.

We come now to the patent to Wilson which discloses a hand operated material distributor. This Wilson distributor includes a hopper and a casing attached thereto at the bottom thereof, and this casing includes a transversely extending portion 27. Additionally, Wilson utilizes a fabric or similar flexible material skirt which depends from the bottom of the hood to which it is attached on all four sides thereof. This depending skirt 27 is in (83) no way comparable to applicant's depending skirt or curtain 50. The Wilson material distributor is a hand operated device adapted to be either pushed or pulled by an operator whereas applicant's invention relates to a pulverulent material distributor that is attached to the rear part or end of a vehicle. The problems encountered in operating a hand distributor as in Wilson and those for applying the pulverulent material to acreage as embodied in applicant's application are in no way comparable and it is believed, therefore, that this Wilson patent has no particular bearing on applicant's invention and is not properly in any combination with the Johnson patent hereinbefore discussed.

In the McDow patent straw spreader, the rotatable distributors 26 for the straw are below the bottom edge of the depending apron 18 of fabric that is attached to the hood also above the said distributors. McDow states in his specification, starting in line 98, column 2, page 1, and ending in line 3, column 1, page 2:

> "The hood is provided with a depending apron 18 of fabric or comparable material attached to the hood 17 and also to the framework 6. The apron extends to within a short distance of the platform and aids in directing the straw to fall thereon."

It will thus be seen that the apron 18 of McDow is simply utilized to direct the straw down onto the platform on which the rotatable spreaders are mounted and serves no purpose or function whatsoever as regards directing the straw that is scattered by the spreaders on the ground.

Reference is made to the Litchfield patent 1,668,516, May 1, 1928. Litchfield does show the articulated fertilizer distributing sections 13 and 14, the latter being hingedly (84) connected to the former. The section 14 projects laterally from one side only of the section 13 and, at the extreme free end of this section 13, there is a trough or short extension 36 pivotally connected at the end of the section 14. This is what Litchfield et al has to say about the pivoted short section 36, starting in line 110 in the second column of page 3 of the specification and ending line 4 of the first column of page 4:

> "There may be some large pieces of fertilizing material particularly when the latter is lime rock, that will not pass through the discharge outlets in the bottom of the trough. If these pieces are left in the trough they may interfere more or less with the distribution. We have, therefore, placed at the extreme outer end of the section 14 of the trough a short extension 36 communicating with the trough through the space underneath the bearing block or wall and open at its outer end. In the bottom of this extension are a few large holes 37. Therefore, as large pieces are carried outwardly along the trough, they finally reach the extension and drop to the ground through the large holes in the extension or through the open outer end of the same.
>
> The extension is preferably hinged to the main trough, as indicated at 360 in Fig. 1A, and it is rounded on the bottom so that if an obstruction is encountered

> thereby, such as indicated at C in Fig. 1A, the extension will be swung up and will safely ride over the obstruction."

It is clear, therefore, that all this Litchfield et al device shows is a manual spreader having a pivoted section, the same being in the form of a trough and this trough 14 and the trough 13 to which it is attached has disposed therein a spiral conveyor whereby the manure is discharged through openings in the bottom of the trough and out through the said short extension 36 at the end of the trough 14. This short extension 36 was not provided to be folded in an inoperative condition as applicant's extension 22 in Fig. 8 of the drawings, and the trough 36 is for an entirely different purpose than applicant's hingedly connected chamber denoted 22 in Fig. 8 of his drawings.

(85) Reference is made with regard to the patent to Tuttle, 896,178. This patent to Tuttle relates to a broadcast seeder and it is exactly what it says; namely, a broadcasting distributor rather than a distributor which collects and accumulates a finely pulverulent material as embodied in the present application. But, Tuttle shows the sectional seed boxes in three sections 19, 20 and 21, the end sections being 19 and 21 which are hingedly connected to the middle section 20 by means of two upright pivot bolts 22 and 23 which pass through eyes in corresponding ends of the said sections constituting the seed box. It is noted that the seed scattering spouts 32 of Tuttle are disposed well above the surface of the ground and, necessarily so, in order to broadcast the seed discharged from the seed boxes 19, 20 and 21. It is quite correct that the seed boxes 19 and 21 of Tuttle are foldable on a vertically disposed pivotation point adjacent the sides of the vehicle on which the seed boxes are mounted but applicant's invention is clearly distinguished therefrom in that applicant's sections

comprising the laterally extending chambers on each side of the fixed distributing chamber are hinged or pivotally mounted on a horizontally disposed pivot or hinge and, therefore, when folded, are upright as distinguished from being folded back on a vertical hinge as in the Tuttle patent disclosure. Moreover, the Tuttle broadcast seeder could not possibly be used for distributing and applying a finely ground or pulverulent material on the ground as can be effected (86) by applicant's distributor and, being from the seeder art, is considered as from a non-analogous art.

In the Official action, it is suggested that the Johnson patent hereinbefore discussed be modified by providing a depending apron from the lower edges of the shields or shrouds 48 as in Allgrunn or Wilson. From what has been said hereinbefore, it is quite obvious that neither the one-hundred foot length of curtain 44 of Allgrunn, nor the curtain or shield 27 of Wilson, can be utilized in connection with the Johnson disclosure and, moreover, there is no suggestion among these patentees to do this. This rejection goes on and then brings in the second foldable shroud hinged to the outer end of shrouds 48 of Allgrunn in view of the Litchfield et al disclosure and the Tuttle disclosure and it is stated that, when such is accomplished, it is not deemed to involve invention but merely the expected skill of a mechanic familiar with the art. It is submitted that there is no disclosure in the Tuttle, Wilson or Allgrunn patents, that would suggest any combination of bringing them together as suggested in the Official action and, even if these structures were brought together, they would not result in applicant's invention as claimed and, to bring such structures together, considerable modification would necessarily have to be resorted to and this would amount to an invention. As regards the reference to the bringing together of the several individual features of the patentees being something that is obvious and merely the expected skill of a mechanic familiar with the art, it is submitted that this is not the case. There have been many expert workers (87) and developers in the material spreading art, all of whom are charged with knowledge of all the patents of record in this case and all other patents that may be extant, and publications, etc., and up to applicant's time, no one individual expert in this art invented a material spreader as embodied in this application and the claims thereof. This, in itself, is quite conclusive evidence and proof that the matter of applicant's invention is not indeed one that is within the expected skill of a mechanic familiar with the art and it is not an obvious expedient involving problems of mechanical design for if these situations had been true, then someone would have invented a spreader like applicant's many years ago because there has been a long felt need for such an invention and it has only come about and been made possible by the present applicant.

From the foregoing discussion, which is believed a fair statement of applicant's invention and the disclosures of the references of record, it is clear that, taking claim 1 as an example, and being typical of some of the other claims, such claim is patentable. This claim 1 recites the attachment for a pulverulent distributor and includes the hopper and the discharge port and the substantially horizontally disposed rotatable impeller means carried by or on a substantially vertically disposed shaft for rendering airborne particles of a material discharged through a discharge port of the said hopper. This attachment is recited as having a central portion that is dimensioned to enclose the discharge port of the hopper and the impeller means, (88) and this central portion includes front, top and rear walls, and there is a pair of end portions which also include front, top, rear and outer end walls, and the said end portions are hingedly secured to the central portion for movement between lowered and raised positions relative thereto. When the said end portions are in lowered position, they combine with the central portion to define an elongated unobstructed open-bottomed chamber, within which chamber the pulverulent material from said hopper is rendered airborne due to the rotation of the said impeller means, and the material will accumulate in sufficient concentration to effect a substantially uniform gravitational distribution through said open bottom without any appreciable blow away of the material and thus effect a uniform application of the material on the ground. The structural features noted in claim 1 and the result as set forth therein are not to be found in the basic reference, Johnson, and any of the other patents combined with Johnson as discussed hereinbefore. It appears, therefore, that claim 1 is clearly patentable over the art of record when such art is considered singly or combined.

Claim 2 is along the lines of claim 1 and differs somewhat therefrom in that the end portions are hingedly secured along their top walls one each to an opposite side of the top wall of the central portion for movement between vertical lowered and raised positions relative to the central portion. There is no such pivotation or hinging of the end portions or sections of a chamber disclosed in any of the patents of record as discussed hereinbefore. Therefore, this claim appears to be clearly patentable.

(89) Claim 3 is substantially along the lines of claims 1 and 2 and differs from both of them in that the overall length dimension of each of the end portions of the chamber is of a dimension from one to three times the overall length of the central portion. This feature, as embodied in claim 3, is indeed important and it results in the uniform accumulation and concentration of the airborne pulverulent material in the three sections constituting the open-bottomed chamber, and thus the

result is a substantially uniform discharge and application of the pulverulent material on the ground and without any appreciable blow away of the material. There is no patent of record meeting this feature of claim 3.

Claim 4 is somewhat along the lines of claim 3 and distinguishes therefrom in that, in addition to other novel features, it calls for the width of each end portion of the chamber as uniformly reduced from a maximum adjacent the central portion of the chamber to a minimum adjacent respective outer ends thereof. There is no such chamber in any of the patents and, here again, this feature is important as the tapering effect of the chamber toward the ends from the central portion thereof serves to allow the airborne pulverulent material to collect uniformly in the end sections as well as the central section and, thus, the airborne material is substantially uniformly applied to the surface of the ground. There is no reference of record showing this feature of applicant's invention.

Claim 5 is along the lines of claims 3 and 4 and, here, the width of the end sections of the chamber adjacent the central portion of the chamber is recited as substantially (90) equal to the width dimension of said central portion, and that the said width is of a dimension from two to four times greater than the width of said end portions adjacent the outer ends. This language results in a tapering effect of the end portions of the chamber and, as aforesaid, serves a very definite and useful function in that it allows the airborne material to accumulate and concentrate therein and be uniformly and substantially evenly applied to the surface of the ground.

Claim 6 is along the line of claim 5 and, in this claim, among other features, it is recited that the overall length dimension of each of the end portions is from one to three times the overall length of the central portion, and the width of each end portion tapers from a maximum equal to the width of said central portion at its inner end to a minimum width of from one-fourth to one-half of their maximum width at its outer end, and, in this claim, the top portions of the end portions are set forth as being hingedly secured to the top of said central portion for movement between vertical lowered and raised positions. This is a definite recitation of the structural characteristics of the end portions and central portion which constitutes applicant's chamber wherein the pulverulent material is rendered airborne and accumulates and concentrates so that it may be properly applied to the ground. There is no reference of record, including the Johnson British patent, that discloses any such structural features as embodied in claim 6.

(91) Claim 7 is allowed.

Claim 16, among other novel features, sets forth the fact that each outer portion along with the central portion constituting the open-bottomed chamber, is hingedly secured to an intermediate end portion for movement between raised and lowered positions relative thereto. This structure is directed to the modification as shown in Fig. 8 of applicant's drawing. The only patent of record having any bearing on the two hingedly connected portions or sections at opposite sides of the central portion of the chamber, is Litchfield et al, 1,668,516. This Litchfield patent has been discussed hereinbefore and, as already stated, it does show the pivoted or hingedly connected trough section 14 with the fixed trough section 13 and the very short hingedly or pivotally connected extension 36 at the end of the trough 14. This short extension 36, however, is not adapted to fold over the end of the trough 14 and is merely adapted to pivot upwardly and downwardly to discharge large particles from the end of the trough and to pivot upwardly in the event the short section meets an obstruction on the ground. Therefore, this short section or extension 36 at the end of the trough 14 of Litchfield et al, is for an entirely different purpose than applicant's outer section 22, which is hingedly connected to the intermediate section such as shown in Fig. 8 of the drawings in this application. Claim 16, therefore, appears clearly patentable.

Claim 17 is somewhat more specific than the hereinbefore discussed claims in that it recites the attachment as consisting of a substantially U-shaped (92) central portion that encloses the discharge port and the rotatable impeller means, and the pair of U-shaped end portions which are hingedly connected at opposite sides to the central portion and combined therewith to define an elongated open-bottomed chamber. It is in this chamber that the pulverulent material from the hopper is rendered airborne due to rotation of the impeller means, and the said airborne material in the chamber accumulates in the chamber in sufficient concentration to effect a substantially uniform gravitational deposit without any appreciable blow away of the material. There will be an appreciable blow away of material in the Johnson British patent and, as hereinbefore set forth, there is no teaching among the other patentees to combine the structure that is new with applicant, and to so modify the Johnson spreader that it could perform a proper distribution and spreading of pulverulent material as embodied in this application.

Claims 18 through 22, it will be recalled, are the claims that were suggested by the Office for purposes of interference and which claims are later rejected on the British patent to Johnson. Claims 20 and 21 of this group of claims have been slightly amended to render them more definite.

As regards claims 18, 19 and 20, each of claims 18 and 19 includes the curtain, or the flexible wall members (claim 20) that depend from the edges of the wing shields. Of course there is other structure involved in the claims and, from what has been set forth hereinbefore, it is clear that the Johnson British patent does not disclose any such curtain or the flexible (93) wall members depending from the edges of the wing shields. Therefore, Johnson lacks the combination as set forth in these three claims, 18, 19, and 20, and it is believed that they were properly introduced into the application by the examiner and, notwithstanding Johnson and the other references of record, that they are clearly allowable.

As regards claim 21, this claim includes a very definite limitation but one that is particularly essential and valuable to applicant; namely, the means for securing the wing shield members in vertical position for transport and each of these said wing shield members being hingedly jointed intermediate its length so that the outermost sections thereof may be folded downwardly between the upper ends of the innermost sections thereof. This folding of the two sections on the opposite sides of the central portion or section of the chamber is clearly patentably distinct from the Litchfield et al disclosure. It has already been said that the short extension 36 at the end of the Litchfield trough 14 cannot possibly be folded over on the end of section 14 and was never intended to do so as is clear from a reading of the Litchfield et al specification and perusal of the drawings in that patent. This structure is certainly new with applicant.

Claim 22 is along the lines of claim 21 and it recites the fact that the pair of end frames are connected to the ends of the first pair of frames and that the latter frames each have a rounded end and tapered sides. Here again, the foldable sections are referred to and the particular shape of the end sections which are rounded and have tapered sides. This rounded and tapering formation is indeed important in that it is remote from the (94) central portion or section of the chamber and, being tapered and rounded, it allows that pulverulent material to be accumulated airborne therein and of sufficient concentration so that a substantially uniform application of the pulverulent material from the complete open-bottomed chamber to the ground is thereby effected. Otherwise, if the end sections of the chamber were not so tapered and rounded, it would be more difficult at least to accumulate and concentrate the airborne pulverulent material in these end sections.

The Primary and Assistant Examiners will recall that a claim substantially like claim 23 was discussed with them some time back and, at that time, it was stated that, after a careful study of the art and the application, it appeared that claim 23 is patentable to someone and, if and when an interference is declared, a claim such as claim 23 should, in applicant's opinion, be embodied in and constitute at least one of the counts of the interference. This claim 23 is directed to applicant's particular open-bottomed chamber that is constituted by the central portion of the chamber that is attached to the vehicle and the pair of elongated end portions that are hingedly attached at opposite sides to the central portion. The particular language of claim 23 is indeed significant in that it calls for the elongated unobstructed open-bottomed chamber which is not so in the Johnson spreader and, additionally, this claim recites the fact that the material that is introduced into the central portion of the chamber from the hopper port is rendered airborne by the impeller means and effects a uniform distribution of the airborne material in the (95) central portion and also a uniform distribution of the airborne material in each of the said end portions of the chamber. The claim goes on to say that the said airborne material accumulates in and fills all of the interior portions of the entire chamber and in sufficient concentration to effect a substantially uniform discharge of the material throughout the entire unobstructed open-bottomed area of the chamber and without any appreciable blow away of the material. This means that the central section or portion of the chamber and the two end sections must be so constructed that the airborne and accumulated and concentrated pulverulent material can be applied to the ground without any appreciable blow away of the material. Therefore, it would necessarily follow that the said sections constituting the chamber must be constructed as to accomplish that very novel result of properly applying the pulverulent material to the ground without any appreciable blow away of the material. This cannot possibly be accomplished in the Johnson spreader and, additionally, the Johnson spreader cannot be modified or added to properly by the disclosure of the other patents of record. Therefore, it is believed that this claim 23 is clearly patentable.

As to claim 24, it is substantially along the lines of claim 23 and differs therefrom in that it includes the plurality of horizontally aligned sections that are hingedly connected together, see Fig. 8 of applicant's drawings, and the claim goes on to recite the fact that, when the sections are in raised position they will fold upon themselves. This structure of foldable sections is not present in Litchfield et al or any of the other patents of record and is not suggested by any of these patentees, singly or when combined.

(96) It follows, therefore, that claims 25 and 26 which are depended from claim 23, and which include the flexible means that surrounds and is attached to and depends from the lower perimeter of the central and end portions for increasing the effective volume of the chamber and locating the discharge zone of pulverulent material closely adjacent the ground, and in claim 26, wherein the pair of elongated end portions are hingedly secured at the opposite sides of

the central portion and are in the form of hingedly connected together sections, respectively, are also clearly patentable.

Claim 27 is also depended from claim 23 and this adds to that claim the aforesaid flexible means and the pair of elongated end portions that are hingedly secured at opposite sides of the central portion and which ends are in the form of hingedly connected together sections. This claim, too, is clearly patentable over Johnson and Litchfield et al or any combination of patents of record.

Claim 28 is depended from claim 24 and this claim adds to claim 24 the flexible means that surrounds and is attached to and depends from the lower perimeter of the central and end portions of the chamber. Claim 28 appears clearly patentable.

In view of the foregoing, it is clear that claims 1, 3, 4, 5, 6 and 17 are patentable over Johnson. It is further submitted that claim 1 is most certainly not fully met by Johnson or any of the other references of record. Additionally, it is submitted that the particular width and length and shape of applicant's (97) chamber that is constituted by the central and end sections and also the foldable end sections, are not obviously features of design. These features are structural and perform a unique purpose that has not heretofore been accomplished in the pulverulent material spreader art.

Additionally, it is submitted that claims 2, 18, 19 and 20, for reasons hereinbefore set forth, are clearly patentable over Johnson in view of the fabric depending apron shown in the patents to Allgrunn and Wilson, and the rotary blades of the McDow patent which are for spreading straw, and the disk in the Baughman patent. McDow and Baughman have no particular bearing at all on applicant's claims 2, 18, 19 and 20 and it is believed that they are not properly included or combined with Johnson for reasons hereinbefore set forth. Further, claims 16, 21 and 22 are believed to be clearly patentable over Wilson in view of the hinged foldable outer end member 36 in Litchfield et al and the foldable seed boxes disclosed in the patent to Tuttle for reasons hereinbefore set forth. The short end section 36 was never intended to be folded over as is applicant's end section folded over when in a vertical or inoperative position. Wilson, as hereinbefore stated, is for a hand operated machine and all that he discloses is a relatively short curtain 27. This curtain 27 of Wilson merely acts to keep the material that is discharged from the hopper on the grass or surface of the ground that is acted on by the brush 29. The seed boxes of Tuttle fold in an entirely different manner from the end sections of applicant as set forth (98) hereinbefore. It is further submitted that there is no teaching among the patentees to add another similar or tapering shroud at the outer end of the shrouds 48 in Johnson, as suggested in the Official action, and as suggested at 36 in Litchfield et al, for the reasons hereinbefore set forth. The seed boxes 19 and 21 are not foldable on themselves and they are merely foldable on a vertical point of pivotation rearwardly of the fixed seed box 20, see Fig. 4 of Tuttles patent.

As regards the Landrock et al decision 624 O.G. 663; and In re Horney, 161 F. (2d) 271; 73 U.S.P.Q. 293, these decisions are believed not to be in point nor controlling as regards the present applicant. In the said decisions and others that are similar thereto, and particular in Landrock et al, it must be kept in mind that the United States Court of Customs and Patent Appeals modified the decision of the Patent Office and, as regards certain of the claims that were on appeal to the Court; namely, claims 27, 28 and 29, the Patent Office was reversed. In this Landrock et al decision, and with regard to claims 27, 28 and 29, here is what the Court decided:

> "Claims 27, 28 and 29 were rejected on the disclosure in either of the patents to Caps in view of the disclosure in the patent to Townsend and the disclosure in the patent to Anson. Each of those claims includes a motor for actuating the feeding and severing means, a conveyor for delivering severed film from the housing, and a means operated by the motor or its circuit for controlling the conveyor. Although sequential operation of conveyors is broadly old, as disclosed in the patent to Anson, the references do not disclose an operating arrangement of film feeding, severing, and conveying means, as called for by claim 27, 28 and 29. Considering that arrangement, in combination with the other elements called for by those claims, we are constrained to disagree with the Patent Office tribunals, and are of opinion that claims 27, 28, and 29 are patentable over the references of record."

(99) From the foregoing, it will be seen that the Court held that claims 27, 28 and 29 were patentable and disagreed with the Patent Office finding that the combination of patents relied upon by the Office for rejection did not in fact meet the combination of elements called for in the claims. This is precisely the situation that we have in the present application; namely, the references relied upon for rejection do not meet the combination of elements and the structural features, etc. that are defined and clearly set forth in applicant's claims, and, therefore, they are patentable.

Applicant's position is fully supported in the in re Camp decision set forth supra.

Considerable time, thought and analysis has been given to the entire situation in this case. Applicant regrets the rather voluminous amendment but, in order to cover every phase of the situation and go into the same thoroughly, it was necessary that the amendment be rather long. Applicant has taken this opportunity to go on the record with regard to the patentability of all of the claims now in this application and it is believed that he has made his position clear and tenable. Applicant agrees that the said claims that were suggested for purposes of interference were properly set up by the examiner and included in this application and that, along with the other claims, should now be allowed or an interference set up, if such interference is in order.

Respectfully submitted,

J. WARREN KINNEY, JR.,
Attorney for Applicant.

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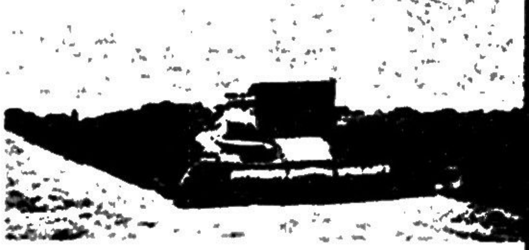
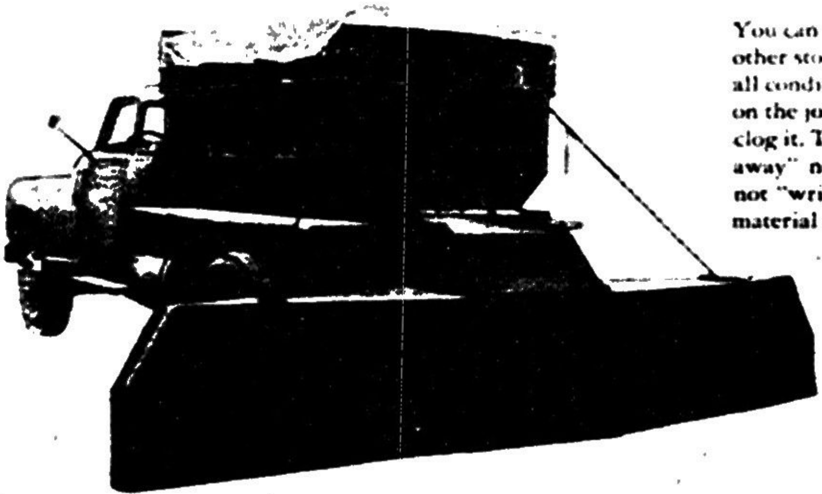
Farmers prefer ANTHONY quality spreading! You can earn more money, get more jobs, with Anthony heavy duty lime and material spreaders for spreading aglime, chips, cinders, sand, etc. With the Anthony phosphate attachment, which is recommended for all fine and super fine ground material, you can do custom spreading at lowest cost. The Anthony phosphate spreader is light weight (only 290 lbs.) strongly constructed throughout for years of costless operation—no gears, belts, chains or screws to wear and get out of order— one man operation for spreading of coarsest to finest materials. Even in strongest wind "blow away" is negligible. Overall width is 16½'. One mile distance traveled covers 2 acres.





You can spread rock phosphate, super-phosphate or any other stock piled or sacked commercial fertilizers under all conditions—windy days will not prevent you getting on the job—lumps, sticks, stones, paper or weeds cannot clog it. Three ply rubber laminated curtain makes "blow away" negligible. Rubber curtain, unlike canvas, will not "wrinkle", blow out, or become stiff with clinging material and it is not affected by mildew.

View above shows Anthony phosphate spreader folded up for spreading aglime, chips and coarse materials, in customary manner. In a few minutes one man can fold it up for transportation on the highway, too. View below shows rubber curtain all around laying an even spread of material.

The principle of the Anthony phosphate spreader is illustrated at right. Material slowly being conveyed from the spreader box falls onto the twin spinners of the spreader. Turbulence created by the spinners causes the fine material to become a dense cloud within the housing of the attachment where the particles settle evenly to the ground for complete uniform spread.

ANTHONY COMPANY

STREATOR, ILLINOIS

P51-64918

(101)

OFFICIAL LETTER DATED OCT. 5, 1950

Responsive to amendment filed June 12, 1950.

Additional references made of record:

Stoltzfus	2,281,212	Apr. 28, 1942	275-8
Hoffstetter	2,500,681	March 14, 1950	275-2F

Claims 8-15 have been canceled, and claims 1-7 and 16-28 are presented for further consideration.

Though the added references were mentioned at the interview referred to under "Remarks" and their pertinency recognized, it is noteworthy that their existence was ignored in the lengthy argument presented in support of the claims over the references previously relied on. While the references previously combined with the British reference to Johnson are still deemed pertinent in fully disclosing the idea of a canvas or fabric apron for preventing air currents from interrupting uniform scattering of light, powdered material over extended surfaces, e.g., McDow, Wilson and Allgrunn, and McDow shows the broad combination with rotary scatterers in horizontal planes mounted on vertical axes, it is not considered necessary to rely further on such secondary references in view of the added reference to Stoltzfus which shows such horizontally (102) mounted flat discs 12 on vertical axes entirely enclosed by the canopy 21. Similarly, the added reference to Hoffstetter replaces Litchfield et al of record, inasmuch as the outer hinged sections 20 are hingedly secured, as at 26, to the outer ends of the inner sections 19 on which the outer sections may be superposed during transport.

The claims have received careful and individual consideration in the light of applicant's extended remarks, but with many of which the Examiner is obliged to join issue.

For instance, commercial success is merely persuasive and not by any means conclusive evidence of patentability. In this see Textile Machine Works v. Louis Hirsch Textile Machines, Inc., 497 O.G. 431; 302 U.S. 490; 1938 C.D. 49, 54, 98. Also In re Myers, 508 O.G. 288.

In support of the combination of references to which applicant so vigorously objects, and particularly in response to the case of In re Camp, P. 11, it is believed that applicant has confused the issue in said decision pertaining to old combination with the simple issue wherein the combination alleged amounts to no more than the obvious assembly of common features from prior art devices wherein no new or unobvious result is achieved, but merely the aggregate of each element functioning as it had before in other assemblies. There was no rejection based on "old combination" but rather on the obvious assembly of common features without effecting any patentable combination. In support of such combination of references attention is called to Ex parte Fine, 364 O.G. 511; 1927 C.D. 84. In (103) re Mulholland, 636 O.G. 1062 (1950). In re Milne, 563 O.G. 581; 1944 C.D. 257. And, finally, Thompson et al v. Boisselier et al, 114 U.S. 1, 11. 31 O.G. 377; 1885 C.D. 224. In the Thompson et al decision the Supreme Court said:

> "To be patentable, a thing must not only be new and useful, but must amount to an invention or discovery."

In the In re Milne decision the court said in regard to combining references:

> "The only question is whether one skilled in the art, familiar with appellant's British patent, upon examining the Baxter patent would, without the exercise of the inventive faculty, determine that the addition of Baxter's baffle would be an improvement upon

> the structure disclosed by the British patent. This is the only consideration required to determine patentability where references are combined".

In regard to appellant's contention that, before references may be combined to negative patentability, one or more of the references must teach the combination claimed, **Held** that "If appellant's contention should be sustained, then it would never be necessary to combine references to negative patentability, for if one of the references must teach the combination claimed, that reference would be a complete anticipation of the invention and there would be no occasion to combine references."

In the more recent Mulholland case, decided April 3, 1950, the court said:

(104)

> "Held that if the various elements which go to make up appellant's disclosure are found in the references, even though a part may be taken from one and another part taken from another, if no new and useful result is obtained and if there by no invention, the disclosure is anticipated; this has been held to be the law in process as well as in device patents".

As understood from the general tenor of the foregoing decisions, patentability is predicated on the conditions that the device must be **new, useful,** and the combination and result **unobvious** to a skilled mechanic or artisan familiar with the arts involved. While the utility of applicant's device is not questioned, and the particular assembly is not shown in any single reference, each separate element is **old** as exemplified by the references and their assembly and arrangement in a single device and the aggregate result attained from such assembly are deemed obvious to a skilled mechanic, especially after Johnson's disclosure.

In view of the foregoing considerations, claims 1, 2, 18, 19, 20, 23 and 25 are rejected as unpatentable over Johnson of record, taken with the added reference to Stoltzfus. Johnson is considered the basic reference, disclosing a central U-shaped open bottom housing about the discharge end of the hopper body, extending downwardly and enclosing the rotary impact members 33, 34 and 35 for dispersing finely powdered fertilizer material, such as "lime, super-phosphates, nitro-chalk and like dry powdered fertilizers over the face of the ground, the object of the invention being the provision of such a machine which will (105) spread fertilizer over a large area in a substantially uniform manner" (see page 3, column 1, 2d paragraph). It is submitted that the inverted U-shaped shrouds 48, may be of any depth found expedient and will act as deflectors to direct the powder laden currents transversely of the machine to the baffles 70 and effect a uniform concentration and distribution along the surface traversed under ordinary atmospheric conditions. If desired, there would be no invention in the attachment of a depending apron or canopy of fabric or other flexible material to the lower edges of the inverted troughs 48 and central portion in view of Stoltzfus to protect the material from wind currents. Nor would there be invention merely in substituting horizontal spreading discs on vertical axes as in Stoltzfus in lieu of the impact members 33, 34 on horizontal axes in Johnson's device, thus leaving the central portion unobstructed save by the presence of the discs as in applicant's device. It is submitted that such obvious addition of the canopy 21 in Stoltzfus and the substitution of one common type of scattering disc for another would involve no more than the expected skill of a mechanic conversant with the prior art. It is further considered that the adjustable baffles 70 in Johnson's device effect the same results as applicant's closed ends in his end portions and are deemed the full equivalent thereof. That portion of claim 23 from the comma in line 16 to the end, which also occurs to some extent in other claims, and stressed in applicant's argument, relates (106) solely to function and result, which is not entitled to patentable consideration in distinguishing over the combined similar features disclosed in the references to Johnson and Stoltzfus, since no additional structural feature is claimed to support such alleged functions that is not present in the proposed combination of Johnson and Stoltzfus. On the contrary, what is true of the one is obviously to be expected of the others when combined. On the above question an issue appears to have been reached.

Claims 3 and 17 are again rejected as substantially met by Johnson. Claim 3 differs structurally from Johnson merely in the relative **lengths** of the end portions to the central portion. While this ratio is admittedly a matter of choice as implied by the variable ratio "from one to three times the overall length of said central portion", applicant is referred to lines 28-32, column 1 on page 7 of Johnson's specification wherein it is stated that "various modifications are possible; for example, the shrouds (48) may be of a telescopic construction", thereby affording lateral adjustment longitudinally of their lengths. In any event, such specific variants are matters of choice or design to which no patentable significance is attached. Claim 17 is directly readable on Johnson.

Claims 4, 5, 6, 16, 21, 22 and 24 are rejected as unpatentable over Johnson in view of the outwardly tapered, hinged, foldable outer sections 20, 21 in Hoffstetter. This patent shows that the end sections 20 are hinged at 26 to (107) intermediate sections 21 and may be superposed thereon. No invention would be involved merely in tapering the shrouds 48 in Johnson and in hingedly connecting the outer end pieces to the ends of shrouds 48 if so desired in lieu of the telescopic connections suggested. While the extensions 18 taper only in a vertical plane, it is obvious that such tapered construction, whether in a vertical or horizontal plane, would result in a progressive concentration of the material toward the outer end, and a more uniform distribution of material over the area. The tapered features are deemed to find their full equivalents in Hoffstetter. In any event, whether tapered in a vertical plane, or a horizontal plane, or indeed both planes, is considered a matter of design devoid of invention. It is noted that Johnson may provide cable attachments for the ends of the shrouds operated from the driver's seat for elevating, locking and lowering same as desired, as in Litchfield of record.

Claims 26, 27 and 28 are rejected as unpatentable over Johnson, taken with the horizontally mounted scattering discs 12 and depending canopy 21 in Stoltzfus, as applied to claims 1, 2, 23, etc., above, and with the tapered, hinged housings 18 in Hoffstetter as applied to claims 4, 16, 24, etc., hereinabove. Since it is manifest from the claims of different scope that neither group as listed above is dependent on all features of the other groups, but may function independently and in other organizations, it follows that the aggregation of all the secondary features in a (108) single device is a matter of choice and is held not to involve invention in view of the many decisions cited above and of record.

Claim 7 stands allowed as previously advised.

Claims 1-6 and 16-28 stand rejected.

Applicant is advised to place the application in condition for final action.

Examiner

L:wm

(109)

AMENDMENT FILED JAN. 25, 1951

Cincinnati, Ohio
January 6, 1951

Hon. Commissioner of Patents
Washington 25, D. C.

Sir:

This is in response to Official Letter dated October 5, 1950.

At the outset it will be noted that applicant's device is **NOT merely** a "wind barrier" as implied by the Examiner. Applicant's device, in combination with the spreader mechanism of a commercial limestone spreader, distributes finely pulverized material in a new, unobvious and highly efficient manner neither suggested nor disclosed by the references of record.

The Johnson (British) reference merely discloses a transverse GUIDEWAY for defining the "area of depositation" of pulverulent or granular material "thrown transversely — **IN ONE DIRECTION ONLY** — by a **paddle-wheel** type impeller."

The trajectory of the material distributed by paddle-wheels 33 and 34 of Johnson is clearly illustrated (110) in Fig. 5, a cursory inspection of which will suffice to conclusively and irrefutably establish the **fact** that the interior of the transversely projecting aprons 48 are **NOT filled** with air-borne particles of the material being distributed.

It is clear from the specifications and drawings of Johnson that the "**width**" of the **stream of particles** projected by paddle-wheels 33 and 34 **remains uniform** — the width of said stream being directly proportional to the **length** of the paddle-wheels.

It is submitted that **judicial notice** should be taken of the fact that Johnson does **not** suggest or disclose a "central

U-shaped open bottom housing about the discharge end of the hopper body", as suggested by the Examiner on page 4 of the office action — rather — The "central portion" of the Johnson device comprises, and is defined by, a **pair of** laterally spaced **end plates** 37 and 38 **OPEN** along their **entire top, bottom** and **opposite** side edges!

Judicial notice should likewise be taken of the fact that the Johnson reference is NOT an **attachment** for an existing pulverulent distributor, (111) but comprises the **distributor mechanism, per se!** A reading of the specification and an inspection of Figs. 1-5 of the reference will conclusively establish this fact.

It will likewise be noted that **if** (solely for sake of argument) it be assumed that the Johnson device be an "attachment", then it is an attachment for effecting transverse distribution of pulverulent material discharged vertically from the upper reach of an endless conveyor 6, and as such **must of necessity** include **THREE paddle-wheel type** impellers, two of which are driven in **opposite** directions and a plurality of suitably arranged inclined baffle members for dividing and then directing portions of the pulverulent material discharged from the upper reach of endless conveyor 6 onto the paddle-wheel impellers.

It is submitted that a reading of the specification of the Johnson reference taken in consideration with the disclosure of Fig. 5 **conclusively** establishes that the transversely extending shrouds 48 are **MERELY** for the purpose of defining the outermost end of the trajectory of material hurled transversely by paddle-wheels 33 and 34, the outer end of the trajectory being determined (112) by and a function of adjustable bafflles 70. A portion of the upper wall of the **shrouds** 48 remote from the "central portion" is utilized to limit the upward travel of the pulverulent material, thereby limiting the vertical path of its trajectory — see Fig. 5.

It is quite obvious that to lower the sides of shrouds 48 would accomplish no beneficial purpose, since Johnson's shrouds **merely** establish the **transverse distribution limits** of the pulverulent material so that unnecessary "overlapping" will not occur when making the next pass down the field for laying the next adjacent swath of fertilizer.

Judicial notice may be taken of the fact that to extend shrouds 48 of Johnson down to within ground level would in **no way** alter the operating characteristics of paddlewheels 33, 34 and 35, **nor** would it alter trajectory of the projected fertilizer transversely of the shrouds, **nor** would it result in any alteration in the distribution characteristics of the device.

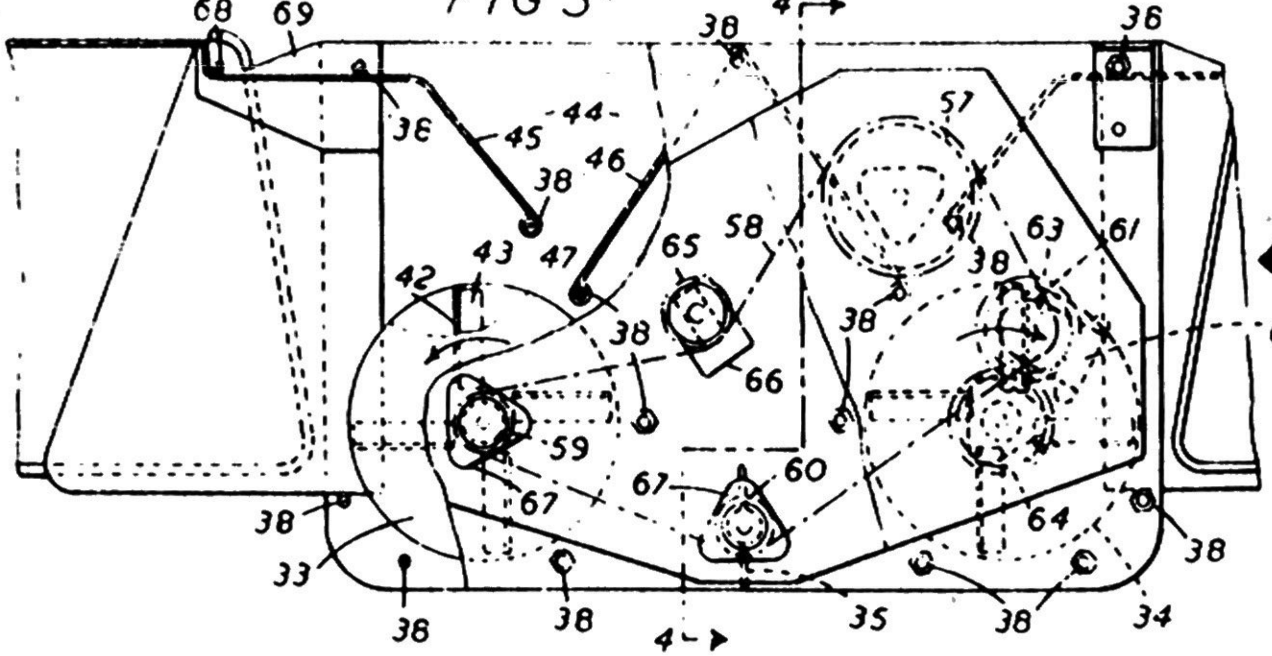
For clarity of detail and understanding and for the convenience of the Examiner, a photostatic print of the drawing comprising part of the Johnson reference is submitted herewith, bearing suitable notations for (113)facilitating understanding of the hereinabove remarks with reference to this reference.

This Drawing is a reproduction of the Original on a reduced scale

"Central portion" is not an attachment for a distributor but is a distributor per se.

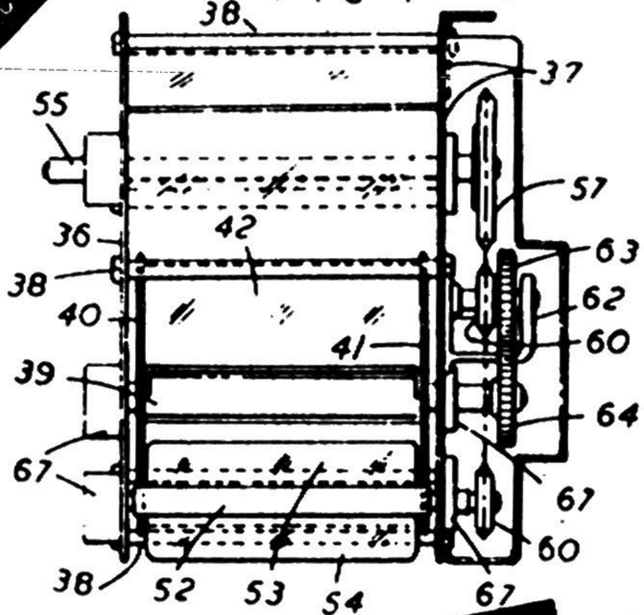
"Central portion" comprises end plates 36 and 37.

FIG 3



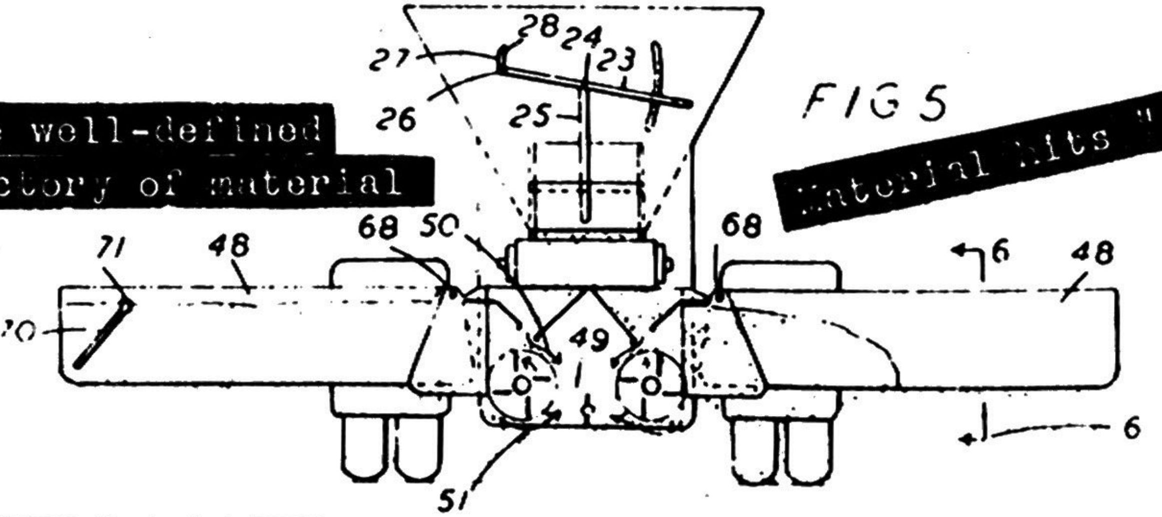
There is no top.

FIG 4



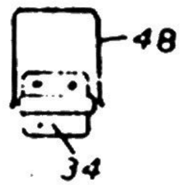
Material hits "top" of shroud in only one place.

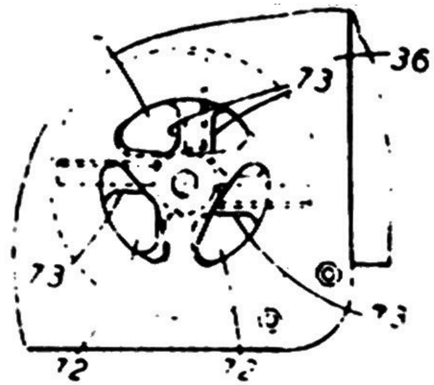
FIG 5



Note well-defined trajectory of material

FIG 6.





Material distributed does NOT fill shrouds 48.

The **Stoltzfus** reference was not discussed at length in the prior amendment because it was believed that the terminology found in the various claims so clearly avoided the teachings and disclosure of this reference as to render a detailed discussion thereof unnecessary.

(114) The entire operative principle of the Stoltzfus reference differs from that of applicant's device. In lines 17-21, column 1, page 1, of the Stoltzfus specification, we find the following significant language:

> "The purpose of the curtains is to protect the distribution of the material from the disks from air currents or wind so that the uniform distribution of the material will not be affected on a windy day".

In other words, Stoltzfus does not alter the **manner in which pulverulent material is distributed** when he adds his curtained structure — he is merely shielding the distribution zone from the influence of external air currents.

Judicial notice may be taken of the fact that the "curtains" of the Stoltzfus reference do **not** provide a **closed housing**, as called for in applicant's claims, since, as is obvious from inspection of Fig. 3, the curtains extending transversely from the truck body **adjacent** the truck body **are discontinuous**, thereby providing a central opening the width of which is approximately 25% of the overall width of the housing defined by the curtained structure!

A study of the Stoltzfus drawings further indicates that the canvas housing, besides being (115) discontinuous (by reason of the **large** opening in the rear panel) is unitary or one-piece and does **NOT** comprise a **central portion AND** a pair of **elongated end portions** as specifically called for in each of applicant's claims.

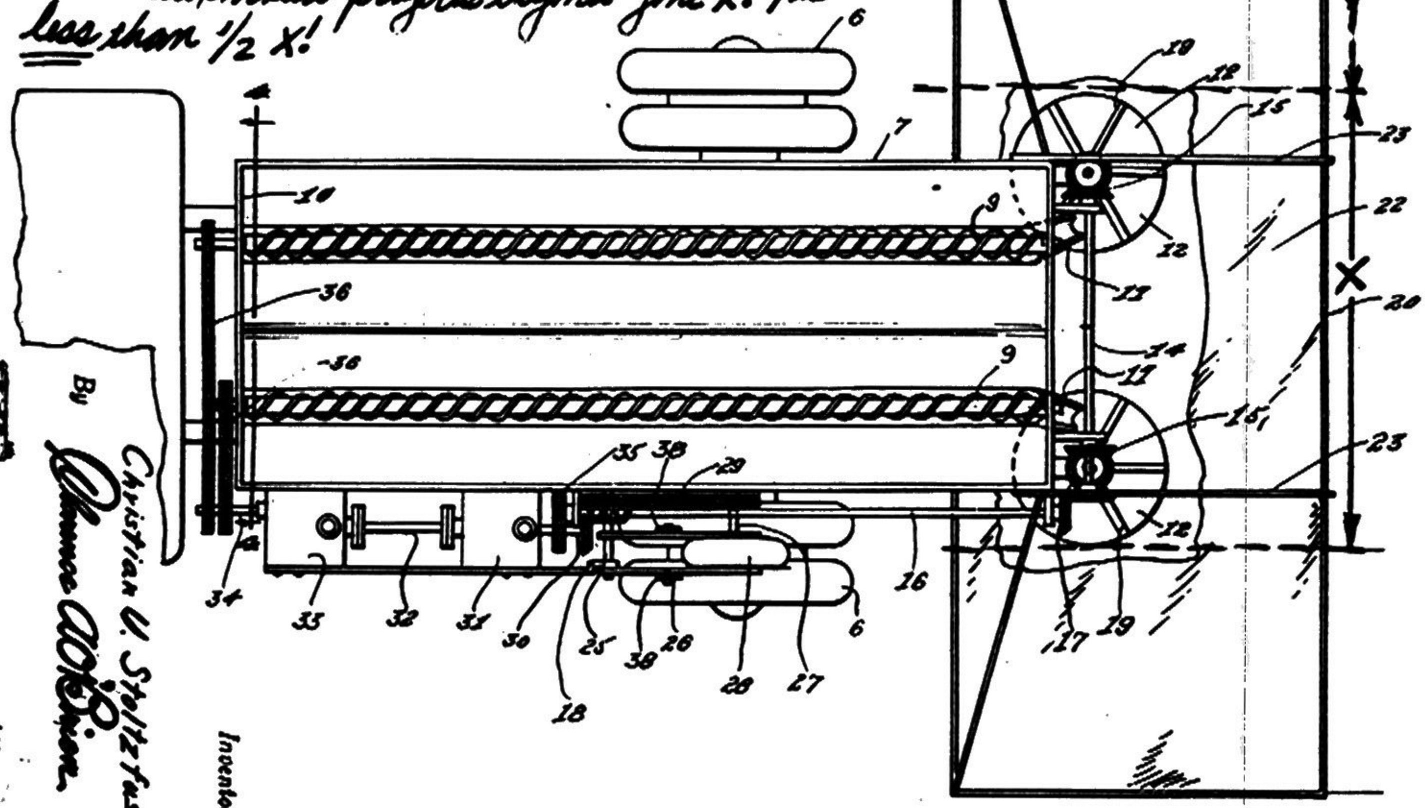
Further proof that the Stoltzfus device operates differently from that of applicant may be found in Fig. 2 wherein it will be noted that the "transverse" spread of impeller wheels 12 is but 25% greater than their rearward spread, thereby confirming statements found in the specification of this reference to the effect that the purpose of the canvas housing is **merely** to prevent wind or air currents from unduly affecting the uniform distribution of material such as would occur were the curtains not used.

Photostatic prints of Figs. 2 and 3 of the Stoltzfus reference, bearing suitable notations, are presented herewith for further emphasizing the factual phase of the remarks regarding this reference, said notations indicated in longhand.

April 28, 1942. C. U. STOLTZFUS 2,281,212
MATERIAL SPREADER
Filed July 27, 1940 3 Sheets-Sheet 2

Note: dimension X = the length of the zone housed by applicants "central portion." Y = the amount (length dimension) by which the curtained shroud projects beyond zone X. Y is less than 1/2 X!

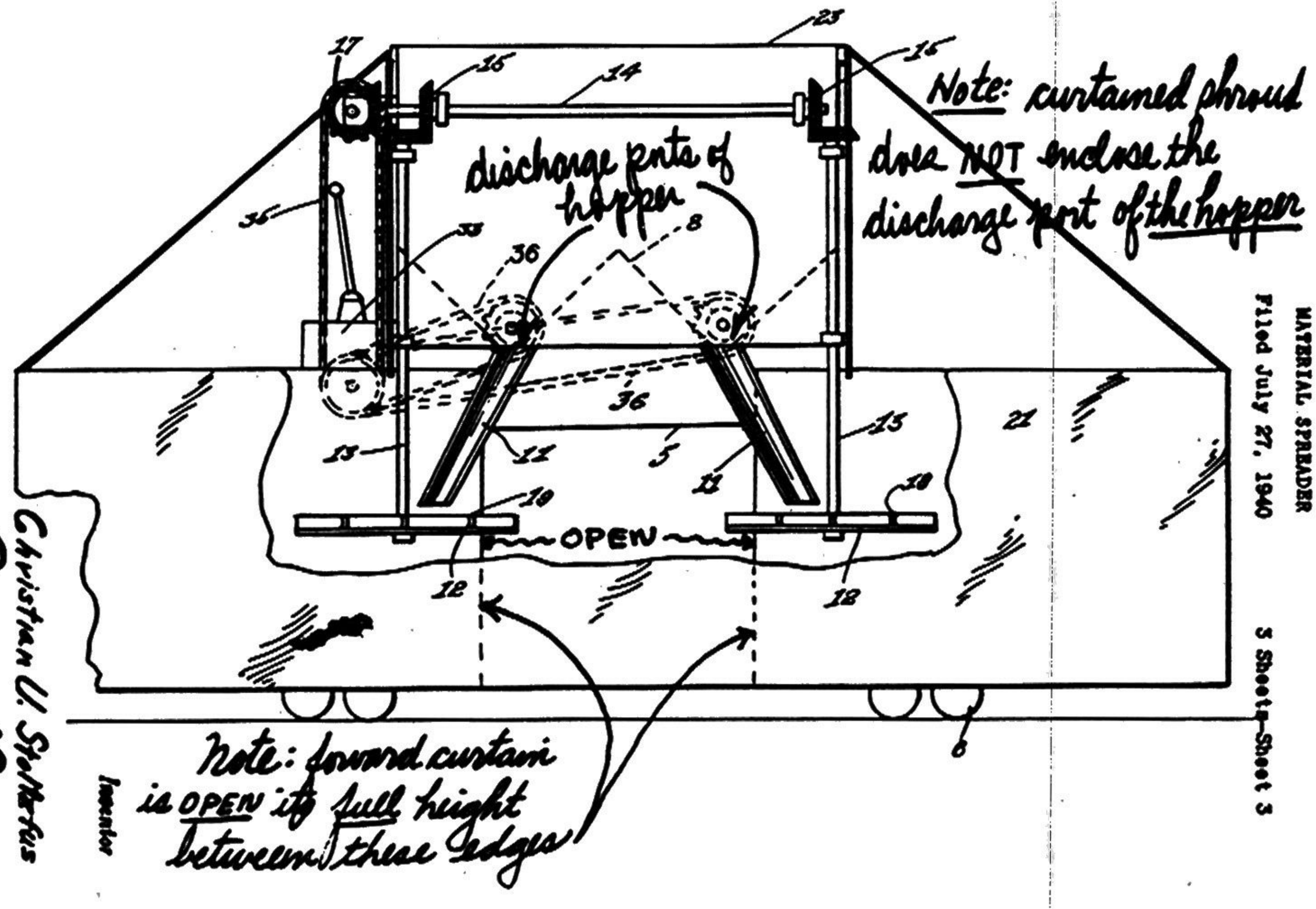
Fig. 2.



Christian U. Stoltzfus
Inventor
By Clarence A. O'Brien
Attorney

April 28, 1942. C. U. STOLTZFUS 2,281,212
MATERIAL SPREADER
Filed July 27, 1940 3 Sheets-Sheet 3

Fig. 3.



discharge ports of hopper

Note: curtained shroud does NOT enclose the discharge port of the hopper

Note: forward curtain is OPEN its full height between these edges

Christian U. Stoltzfus
Inventor
By Clarence A. O'Brien
Attorney

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(116)

(117) With reference now to applicant's device, it will be noted that it is an **attachment** for a pulverulent distributor, which includes:

(1) A hopper having a discharge port;
(2) Rotatable impeller means associated with the port;
(3) Means for rotating the impeller.

These three items may be considered old and part of the device to which applicant's attachment is securable.

Applicant's attachment includes first, a **CENTRAL PORTION** including **TOP, FRONT AND REAR** walls, thereby clearly distinguishing from the shrouds of the Stoltzfus and Johnson references.

Applicant's attachment further comprises a **pair** of end portions hingedly secured to the central portion.

When the end portions of applicant's device have been fully lowered (as in Fig. 1), they combine with the central portion whereby to define a hollow, elongated, unobstructed, open-bottomed chamber having top, front, rear and end walls. Each of the various claims recites the new and unobvious result obtained from the combination of the housing with the discharging and impeller means, viz: The material discharged onto the impeller is rendered airborne whereby to effect a **uniform distribution** (118) throughout the **entire** interior of the composite housing with the result that the air-borne material will **accumulate in and fill all of the interior portions of the chamber in such concentration as to effect a substantial uniform discharge of the material through the open bottom of the chamber onto the ground.**

Applicant's device literally flows the pulverulent material onto the surface of the ground **in a manner quite analogous**

to painting. When thus applied, the blowing away of material is, for all practical purposes, entirely eliminated.

The newly cited **Hoffstetter** reference is no more pertinent than Litchfield, of record, since, like Litchfield, it utilizes a transversely extending **impeller screw** for transversely conveying material through a **closed** housing the **bottom** of which is provided with laterally spaced apertures through which the material being **propelled** through the housing is adapted to drop.

In **neither** Hoffstetter nor Litchfield is the transverse housing **filled** with **air-borne** material.

In neither Hoffstetter nor Litchfield are means provided for rendering air borne the material discharged from bin 10 into **any** portion of the transverse housing.

The mere fact that both Litchfield and Hoffstetter disclose a particular type of **NON-ANALOGOUS** transverse (119) closed-bottom housing provided with elongated **impeller** screws (25 in Litchfield; 31, 32, 33 in Hoffstetter) is of no consequence whatsoever, since neither of these references **teaches** anything about the problem solved by applicant's device.

These references, like Johnson, do **not** disclose an **attachment** for an existing **distributor,** but comprise **distributor mechanisms, per se!**

It is elementary that in the absence of the elongated **impeller screws** of Litchfield and Hoffstetter the material discharged from conveyors 2 and 11, respectively, would merely pile up in the center portion of their respective transversely extending housing, thereby resulting in an inoperative device.

It is likewise just as obvious that if the central portions of the Litchfield and Hoffstetter devices be open at their bottoms, the material discharged from the conveyors would fall by gravity onto the ground and none of the material would enter the transversely extending portions.

It is **imperative** that the honorable Examiner fully understand and appreciate these basic differences in the **distributor** mechanisms of Johnson, Hoffstetter and Litchfield and that of applicant.

McDow discloses a **STRAW** spreader and to in any (120) way "house" the impellers or house their zone of operation would defeat the operating characteristics of the device. However, if it be assumed that the McDow device could be used as a pulverulent spreader, its teachings are no more pertinent than those of the Baughman reference cited by applicant on page 7 of his specification as a "typical" limestone spreader of the type to which applicant's **ATTACHMENT** may be secured.

Wilson merely discloses an elongated hopper having a **perforated** bottom plate 8 through which granular material **falls by gravity**. The material passing through the perforated plate is then subjected to the action of the bristles of elongated brush 29 for knocking the material from the surface of grass, weeds, etc. onto the ground. A depending apron or skirt 27 is provided "to confine within the hood (19) the dust and other particles of discharged material as it is being distributed in the passage of the distributor over the ground" — page 2, column 1, lines 30-33.

Allgrunn discloses a **dusting device** wherein compressed air is utilized to **blow** powdered material through laterally spaced discharge orifices in a transversely extending pipe 34. A **curtain** 44 - 100 feet in length — extends rearwardly of pipe 34 for confining the powdered material onto the ground or foliage growing therefrom.

(121) The Examiner's attention is respectfully directed to the fact that applicant is **not broadly** claiming a rotary distributor and housing — instead, applicant is claiming a **particular** type of attachment **FOR** a rotary distributor.

The Examiner's statement on page 2 of said Official Action to the effect that "the combination alleged amounts to no more than the obvious assembly of common features from prior art devices wherein no new or unobvious result is achieved, but merely the aggregate of each element functioning as it had before in other assemblies" is challenged as an unwarranted conclusion contrary to fact.

The recent Mulholland decision, 85 USPA 270, **strengthens** rather than negates applicant's position, since it holds that

> "Patent may be issued for combination of old elements **WHEN faculty of invention has been exercised in combining them to produce new and useful result."** citing In re Stover (CCPA) 64 USPQ 186.
>
> In the Stover case it was held that a
>
> "Valid patent may issue for new combination of old elements only where invention is exercised in combining to bring about **new and useful result;** new or more extended application of original thought or conception, change only in form, proportions or degree, which **MERELY results in substitution of equivalents doing same thing by substantially same means** with better results, is not invention" (Emphasis added)

(122) The logic and reasoning underlying the Mulholland and Stover decisions is good, sound patent law for the **FACTS** of the cases there involved.

However, the **FACTS** of the instant proceeding are clearly distinguishable from the FACTS of these cases.

Applicant has **NOT "merely"** substituted **equivalents** for doing the **same thing** by substantially **the same means** as disclosed in the prior art.

As hereinabove pointed out, the entire theory and method of operation as well as the structural details of JOHNSON are entirely different from applicant's device! True, Johnson and applicant are seeking and have accomplished the same end results, viz: distributing pulverulent material, however, the "results" are not patentable — rather the **DEVICE FOR ACCOMPLISHING THE RESULT** is patentable.

Applicant's **DEVICE** is **entirely** dissimilar to Johnson, or Johnson in view of any of the references of record.

It is an elementary and basic theorum of patent law that the disclosure of foreign patents must be clear and concise — and that they can only be used for what they "actually disclose".

The **drawings** of Johnson CONCLUSIVELY establish that shrouds 48 merely establish the outer end of the (123) transverse "throw" of material — the trajectory of such material being clearly illustrated in Fig. 5.

If the horizontal spreading disks of Baughman, Stoltzfus or McDow be substituted for the **three paddle-wheel** distributor of Johnson, the resultant device would no longer be JOHNSON — but a new hybrid conceived in the light of **hindsight**, predicated upon applicant's disclosure.

The Examiner's attention is directed to the recent case decided by the Seventh Circuit Court of Appeals, Lewyt Corpn. vs. Health-Mor, Inc. 85 USPQ 335, wherein the law relating to the combination of old elements resulting in patentable subject matter is concisely stated. Judge Lindley stated on page 337:

> "Though the District Court may have correctly found that each of the elements in the Yonkers cleaner was old, it does not follow that Yonkers' combination was ipso facto unpatentable, for a novel combination of old elements which so cooperate as to produce a new and useful result or a substantial increase in efficiency is patentable. Diamond Rubber Co. v. Consolidated Tire Co., 220 U.S. 428, 434; Outboard Motor Mfg. Co. v. Muncie Gear Works, Inc., 119 F. 2d 404, 407

> (48 USPQ 411, 414-415). In this case then, even though the use of a replaceable paper filter, or a conically shaped filter, or an air intake which set up a centrifugal force was not new, still it seems to us that there was patentable novelty in Yonkers' combination of these elements. This **novelty lay in the form of cooperation between the air intake and the replaceable conical paper filter, which operate together to produce a combined result not disclosed or suggested in any of the prior art patents.** That the result achieved is both useful and desirable is evinced by the machine's commercial success, attributable, obviously, to the fact that it eliminates inconveniences and disadvantages inherent in the older cleaners." (Emphasis added)

(124) At this point it may be noted that NONE of the prior art devices disclose applicant's ATTACHMENT, which when affixed to the discharge port of a commercial speader **cooperates therewith** to produce a **combined result** "not disclosed or suggested in any of the prior art patents".

Returning again to the Lewyt Case, page 337, we find the following significant language:

> "Lewyt contends that, although no single prior art patent discloses the structure or mode of operation of the Yonkers cleaner, the latter is not a true combination but nothing more than a mere aggregation of old elements. The District Court agreed, stating that (81USPQ at 11) 'Any one having in mind the designing of a vacuum cleaner and looking over the prior art would find each of the elements of the Yonkers patent, and the combination of them to produce the Yonkers cleaner did not constitute invention.' **However,** as the **Supreme Court** pointed out in Diamond Rubber Co. v. Consolidated Tire Co., 220 U.S. 428, 435, **'Knowl-**

> **edge after the event is always easy, and problems once solved present no difficulties,** indeed, may be represented as never having had any, and expert witnesses may be brought forward to show that the new thing which seemed to have eluded the search of the world was always ready at hand and easy to be seen by a merely skillful attention.' Our language in National Slug Rejectors v. A.B.T. Mfg. Corp., 164 F 2d, 333, 338 (75 USPQ 151, 156), is singularly appropriate in connection with Lewyt's contention that Yonkers is merely an aggregation of the elements of Kirby, Korittke, and Upton, for it is true here, as it was in that case, that '**Even when we take all of the elements of the three patents * * * and select elements from each and put them together as they have never been put together before, we still do not have the * * * combination * * *.**" (Emphasis added)

In the case of Harman v. Scott, 85 USPQ 209, page 211, we find a concise summary applicable to the instant facts, viz:

> (125) "Where, as in the patent in suit, there is a novel combination which produces a new and useful result a patent is not anticipated by piecemeal selection of the component parts of the combination from a number of prior art patents **which themselves did not solve the problem.**" (Emphasis added)

A careful review of the Examiner's position indicates that the language of the Patent Office Board of Appeals in Ex Parte Jagen, 85 USPQ 144, at 145, is most apropos here, viz:

> "The examiner holds also that claims 10 and 19, incl., are anticipated by Dudley modified by any one of Chapman, Koch or Mitchell. **This form of rejection**

> **requires the complete obliteration** of the Dudley combination **with the final evolution of applicant's combination of which there appears to be no suggestion in the prior art.**" (Emphasis added)

The decision of the Examiner was reversed.

See also In re Ostermann & Blendin (CCPA) (decided February 2, 1950, 84 USPQ 451, at 454, as follows:

> "A new and patentable combination is legally recognized, however, where an element which is improved over the prior art coacts in its relationship with the other elements of the old combination **in a new manner and a new and useful result is thereby obtained.** In re Nelson et al., 30 C.C.P.A. (Patents) 1257, 137 F. 2d 106, 58 USPQ 550; Ex parte Mumford, 206 O.G. 878. See also Loom Company v. Higgins, 105 U.S. 580, '91; In re Kinney et al., 35 C.C.P.A. (Patents) 1253, 158 F. 2d 756, 78 USPQ 150.
>
> "There is no disagreement between counsel for appellants and the Solicitor for the Patent Office that the shaping of the new cartridge as specified in the claims on appeal makes for ease not only in handling the cartridge when taking the cartridge out of the machine and plunging it in the sand for refilling, but also in concentrating the stream of air and preventing air diffusion and waste of air in making the blow.
>
> (126) "A comparative analysis of the combination defined in appealed claims 19 and 21 with the combination defined in the patent to Rolff discloses not only that certain corresponding elements of the **involved structures are materially different but also that such elements in appellants' structure coact in a new and different way to bring about a new and useful result.** Moreover, the elements of the structure of the combin-

> ation defined in claims 19 and 21 are not disclosed in any of the cited references.
>
> "Appellants have **not** merely substituted one sand container or a small machine for another whereby the same result has been produced in the same manner as in the structures of the cited. **The elements of the combination claimed by appellants produces a unitary result which has contributed something new to the art worthy of patent protection** by the allowance of claims 19 and 21." (Emphasis added)

Reconsideration of each of Claims 1, 2, 23 and 25, which are rejected as "unpatentable over Johnson — taken with — Stoltzfus", is respectfully requested for the following reasons:

First, Johnson does NOT disclose NOR EVEN **suggest** a "central U-shaped open bottom housing — extending downwardly and **enclosing** the rotary impact members 33, 34 and 35 —"

As earlier pointed out, the central portion of Johnson is NOT U-SHAPED! The central portion comprises two laterally spaced plates 36 and 37 **TO** which the paddle-wheel type impellers 33, 34 and 35 are rotatably **secured.** These two plates also **support** the various gearing and driving mechanisms which PER SE distribute the material discharged from conveyor 6.

Plates 36 and 37 likewise **carry and support** certain inclined chute-forming panels 45, 46 which direct the (127) material to be distributed onto paddle-wheel impellers 33 and 34.

Quite obviously Johnson **neither** suggests **nor** discloses anything analogous to applicant's "central portion" which is described as

> "dimensioned to enclose the discharge port and impeller means, said central portion including FRONT, TOP, and REAR walls—"

as called for in each of claims 1, 2, 3, 4, 5, 6, 16, 17, 23, 24, 25, 26, 27 and 28.

Second, the Examiner is using the stated **object** or **function** of the Johnson reference to anticipate the STRUCTURAL DETAILS of applicant's device, as is clearly evident from the language used in the bottom paragraph of page 4 and extending on page 5 of the last Official Letter.

Third, the Stoltzfus impellers CANNOT be substituted for the impeller means of Johnson, as suggested by the Examiner, without resulting in "complete obliteration" (to quote In re Jajen, supra) of the Johnson reference.

The entire **theory of operation** and **means** utilized to obtain the desired results in the Stoltzfus and Johnson references are **dissimilar**! And the mere fact that the function of both is to "spread fertilizer" is IMMATERIAL to the present proceeding which is directed SOLELY to the structural details of a device.

Fourth, the Examiner's statement that those (128) portions of Claim 23 "from the comma in line 16 to the end, which also occurs to some extent in other claims,—is not entitled to patentable consideration in distinguishing over the combined similar features disclosed in the reference to Johnson and Stoltzfus—etc." is challenged.

In those portions of Claim 23 (by way of example) ample, clear, concise and adequate **structural details** have been recited for fully supporting the statements following line 16.

It is submitted that Halliburton Oil Well Cementing Company vs. Walker, 329 US 1, is the latest authority reaffirming the well settled doctrine that **old elements** included in a claim to **complete the setting for the novel elements can be functionally defined.**

It is further submitted that the statements objected to by the Examiner relate to the **shape, size, location** or operational characteristics of **structural** elements to other elements having certain characteristics as to produce the desired result.

Contrary to the Examiner's statement, in the Johnson reference **neither** the "central impeller portion" **nor** the shrouds 48 are ever **filled** with **airborne** material. No **concentration** of airborne material is effected therefore NONE of the statements occurring in Claim 23 from line 16 to the end are satisfied by Johnson since Johnson merely **THROWS** material transversely by a paddle-wheel impeller and his shrouds **MERELY limit** the trajectory (129) of such material, as clearly indicated in Fig. 5.

Quite obviously the large central opening in that depending wall of the Stoltzfus shroud nearest the truck body results in a device whose **structural details** are radically different from applicant's housing. It is elementary that the function or operating characteristics of the Stoltzfus device MUST differ from those of applicant's device since the **"air-borne"** distribution of pulverulent material **cannot** be obtained with the Stoltzfus structure!

At this point it should again be noted that applicant's claims are not broad "catch-alls" but have been carefully drawn whereby to cover certain **structural details** of applicant's unique **attachment.**

It should be further noted that when applicant's device is associated with the discharge ports and impeller means of a commercial spreader, the entire mode, method or manner of distribution of the device is drastically altered or changed.

Without applicant's attachment the pulverulent material is merely hurled in all directions (like throwing flour in an electric fan). However, with applicant's device the airborne material is concentrated **within** the housing completely closed on its TOP, front, rear and ends whereby to **completely fill** the interior of the composite housing. The airborne material upon reaching concentration is **then** deposited in a uniform and continuous manner (like paint being brushed on).

(130) Reconsideration of Claims 3 and 17, which are rejected as "substantially met by Johnson" is requested.

Johnson discloses nothing anticipatory of lines 3-21 of Claim 3 since the entire "modus operandi" of Johnson is different. The ends 70 of Johnson are barriers against which the transversely projected particles impinge and thence drop vertically onto the ground. Johnson has **no** central portion as called for in lines 5-8 NOR do his shrouds 48 co-operate with his "central **impeller** portion" to provide the structure called for in lines 13-21.

It is submitted that applicant is entitled to claims of the scope of 3 and 17 wherein the overall length dimension of **each** end portion is stated in terms of the overall length of the central portion.

It will likewise be noted that the dimensional characteristics of ends 22 as recited in Claim 3 are neither suggested nor disclosed in Stoltzfus **IF it be assumed** that this reference could be used to disclose a central and a pair of end sections, since applicant's **"central portion"** is (see lines 6-7) "dimensioned to **enclose** the discharge port **AND** said **impeller means."**

Each of applicant's **end portions** are described as having a length dimension (lines 9-12) of from "one to three times the overall length of said central portion". In Stoltzfus the one-piece shroud projects beyond the (131) zone housed by applicant's "central portion" by a dimension **LESS than one-half** the overall distance between impellers 19!

Applicant has made a very valuable discovery which FOR THE FIRST TIME enables pulverulent material, such as phosphate, to be **quickly, effectively** and **efficiently** spread.

Applicant teaches that **ordinary** equipment when provided with his simple, inexpensive attachment having NO moving parts can be used to obtain **new** and **UNOBVIOUS** results. Certainly this rises to the dignity of invention and is patentable.

Claim 17 is clearly distinguishable from Johnson for reasons already given, viz: Johnson's central portion is the IMPELLER means **per se** — and **not** an **attachment** for **association with** impeller means.

Reconsideration of each of Claims 4, 5, 6, 16, 22 and 24 which are rejected as "unpatentable over Johnson in view of — Hoffstetter" is requested.

Judicial notice should be taken that the **WIDTH** of the stream of particles transversely projected by the paddle-wheel type of impellers 33 and 34 of Johnson is a function of the **length** of said impellers, and that so far as the **disclosure** of this reference goes, the **width** of the stream of transversely projected particles is UNIFORM from the impellers out to barriers 70.

(132) The Hoffstetter reference discloses transversely extending **closed** housings of UNIFORM WIDTH the TOP wall of which tapers **downwardly** from a maximum central height. The closed housings contain a **long continuous transverse impeller screw** which moves the granular material outwardly over the BOTTOM wall of the **closed** housing so that the material may fall by gravity through holes in the BOTTOM WALL. The housings are never **FILLED** with the material being distributed.

The Examiner's statement: "No invention would be involved **merely** in tapering the shrouds 48 of Johnson and in hingedly connecting the outer end pieces to the ends of shrouds 48 if so desired in lieu of the telescopic connections suggested" is unfortunate.

The problem of tapering applicant's "end portions" is entirely different and distinguishable from the problem of hingedly conecting them to the "central portion".

The Johnson reference already discloses transversely extending shrouds 48 which are hingedly connected relative to the "central impeller compartment", therefore the **HINGED phase** of Hoffstetter adds nothing new to Johnson.

Quite obviously to "merely" attach Hoffstetter's downwardly tapered closed housings to Johnson would result in a 100% **INOPERATIVE** device since the material thrown into the open large inner end would merely pile up.

(133) To open the bottom wall of the Hoffstetter closed housing would be to go beyond his teachings, however **IF** it be assumed that such **basic** alteration of the Hoffstetter housing is permissible, the association of such REBUILT transverse housing to Johnson would greatly impair the operating characteristics of Johnson since the apex of the trajectory of the material transversely projected would be **lowered**, thereby **materially reducing** the distance which such material is thrown.

To further **basically alter** the transverse housing of Hoffstetter, as suggested by Examiner, to provide a taper in the horizontal **rather** than in the vertical plane disclosed, and to then associate this newly devised housing with the Johnson device would result in an **inoperative** structure.

It has already been established that the **width** of the transversely projected particles is equal to the **length** of Johnson's paddle-wheel type impellers 33 and 34. To taper Johnson's shrouds in a horizontal plane (or those of Hoffstetter) would completely alter the basic and inherent operating characteristics of his device, rendering it less efficient, if operative at all.

Applicant is the first to come up with a simple **attachment which produces new, unobvious and unpredictable results from an old commercially available spreader.**

Applicant has presented claims of varying breadth (134) and scope, as permitted by statute, for defining his invention. The phenomenal results obtained by applicant's device are mute and conclusive evidence that a VERY HIGH DEGREE OF INVENTION is involved.

Hindsight may not now be relied upon to "reconstruct" a hybrid device in the light of applicant's disclosure.

In each of Claims 4, 5, 6, 16, 22 and 24 applicant has **SPECIFICALLY** called for his attachment in precise terminology wherein the structural details clearly avoid the references of record when considered singly or in combination. It is submitted that applicant's claims call for old elements which are combined whereby to provide new, useful and unobvious results never before attained and not obtainable by any of the references!

Reconsideration of Claims 26, 27 and 28 is requested for the detailed reasons given above with reference to Claims 1, 2, 23 etc. and 4, 16, 24 etc.

The Examiner's statement that these three claims are an "aggregation of all the secondary features in a single device" is vigorously challenged as contrary to fact and as wholly unsupported by the cases cited.

If Claim 23 be held allowable, applicant is entitled as a **matter of right** to dependent claims 26 and 27, which relate to additional and specific STRUCTURAL features based upon the subject matter of Claim 23. Claims 26 and 27 are not aggregative but are true COMBINATION claims, wherefore their patentability is believed clearly established.

By the same token, Claim 28 is allowable, as a (135) matter of right, **IF** Claim 24 is held allowable.

Reconstruction of Claims 18, 19, 20 and 21, which were suggested by the Examiner, is respectfully requested.

With particular reference to Claim 18, it will be noted that the language found in line 3 calling for a **"rotary distributor DISC** mounted at the rear"— of a vehicle frame clearly avoids the **Johnson** reference.

The "frame" called for in line 4 is foreign to both Johnson and Stoltzfus since in Johnson the paddle-wheel type impeller is not part of the vehicle but an integral and essential element of his "central-**open**-topped-portion".

In Stoltzfus only one frame is illustrated and it is considerably wider than the width of the vehicle to which it is attached.

The language in lines 4-6 does not read upon Johnson since the "central-**open**-topped-portion" **includes** the paddle-wheel impellers which are secured to and carried by plates 36 and 37.

The language in lines 6-8 avoids Stoltzfus, who disclosed a **unitary** shroud.

The balance of the claim relates to the means by which applicant's hinged end portions are selectively maintained in a raised inoperative or lowered operative position.

With reference to Claim 19, the recitation in the first four lines clearly avoids Johnson whereas the (136) language in lines 5-14 avoids Stoltzfus.

Claim 20 is similarly distinguishable from the references.

Claim 21 is similar to Claim 20 from which it differs by the language in lines 16-20 which relates to the disclosure of Fig. 8.

Before concluding the present amendment, it is believed proper to note and make of formal record the following cases which are authority for applicant's position that each of the claims presents allowable subject matter.

In Universal Oil Products Co. v. Winkler-Koch Engineering Co. and Root Refining Co., 21 USPQ 433, at 440, the

Court cited Judge Buffington in Carneige Steel Co. v. Cambria Iron Co., 89 Fed. 721, wherein he stated:

> "That no one practiced the alleged anticipation, and that no one saw or even suggested, such possibilities in it until after the latter discovery was announced, are cogent facts which warrant the most convincing assurance to the court that such knowledge was conveyed in a neglected and dormant patent."

See also in re Coster, 41 USPQ 232, to the effect that

> "prior art patents recognize the problem but its structure is so complicated that it would seem to have but little practical value; **it does not suggest the simple efficient device of applicants, and does not anticipate it."** (Emphasis added)

It is believed that the decision in Six-Way Corp. v. McCurdy & Co., 27 USPQ 218, at 221, is pertinent authority for overcoming the pertinency of the Johnson (British) reference:

> (137) "Anticipation is not disclosed by a drawing which incidentally shows a similar arrangement of parts, where such arrangement is not essential to the first invention and was not designed, adapted, and used to perform the function which it performs in the second invention, **and where the first patent contains no suggestion of the way in which the result sought is accomplished by the second."** Munsing Paper Co., Ltd. v. American Sulphite Pulp Co., 228 Fed. 700; Topliff v. Topliff, 145 U.S. 156 (Emphasis added)

Also, Bernitz Furnace Appliance Co. v. Dillon B. Wilson, (CCA 3) 27 USPQ 369, at 371:

> "A patent relied upon as an anticipation must itself speak. Its specification must give in substance the **same knowledge** and the **same directions** as the patent in suit." (Emphasis added)

Also, Dewey & Almy Chemical Co. et al vs. Mimex Co. Inc., 124 F. (2d) 986.

> "No doctrine of the patent law is better established than that a prior patent or other publication to be an anticipation must bear within its four corners adequate directions for the practice of the patent invalidated. If the earlier disclosure offers no more than a starting point for further experiments, if its teaching will sometimes succeed and sometimes fail, if it does not inform the art without more how to practice the new invention, it has not correspondingly enriched the store of common knowledge, and it is not an anticipation."

Also, A. R. Mosler & Co. v. Lurie (CCA 2) 209 Fed. 364:

> "A patent for a mechanical combination is not anticipated by a drawing in a prior patent which incidentally shows a similar arrangement, which is not essential to the first invention, and was not designed, adapted, or used to perform the function which it performs in the second invention, **and where the first patent contains no suggestion of the way in which the result sought is accomplished by the second invention."**

(138) Ex parte Johnson, 56 USPQ 34, states:

> "Board cannot say that what applicant did is mere expedient since prior patents were already published for long time and no one followed suggestions of examiner despite obvious advantages."

In conclusion, the Examiner's attention is respectfully directed to the brochure sheet of the Anthony Company, comprising part of the amendment filed herein on June 12, 1950, and particularly to the photograph appearing in the upper right-hand corner thereof, wherein the highly efficient manner in which applicant's attachment co-operates with a commercially available impeller type spreader for uniformly and evenly distributing pulverulent material such as phosphate onto a field is disclosed.

Claim 7 has been allowed.

Favorable consideration and allowance of the other claims of the application is respectfully requested.

Respectfully,

....

Attorney for Aubrey L. Jones

(139)

OFFICIAL LETTER DATED JULY 10, 1951

Responsive to communication filed Jan. 25, 1951, requesting reconsideration of rejected claims 1 through 6 and 16 through 28.

Claims 1 through 6 and 16 through 28 have received careful reconsideration in the light of applicant's extended argument, but are not considered patentable over the references and reasons of record, as previously applied.

The Examiner finds it necessary to differ with applicant on certain statements and particularly in his conclusions. For instance, the manner and equivalent means for efficiently distributing pulverized material is shown by Johnson as the basic reference, the depending apron being suggested by Stoltzfus. While the paddle-wheel type of impeller in Johnson is considered the full equivalent of applicant's horizontal disc type, if indeed not superior for the purpose contemplated, it is reiterated that the mere substitution of one type of scatterer device, as in Stoltzfus, for another is an obvious mechanical expedient, quite feasible in the instant application, and wholly devoid of invention. The same is repeated in connection with the addition of a continuous apron about the lower edge of the shrouds 48. Such expedient (140) is considered obvious to any person familiar with the art and confronted with a similar problem. Applicant questions the fact that the shrouds 48 in Johnson's device could be entirely filled with "airborne" particles. The illustration in Fig. 5 of Johnson certainly indicates the shrouds are filled and there is no reasonable basis in theory or in fact why the paddle wheels 33, 34 in Johnson's device would not be the equal if not superior to the disc type mounted on a vertical shaft as in applicant's device. Both throw the material outwardly; the paddle wheels in Johnson's device direct it radially outwardly along the desired path, while the disc 14 of applicant's device throws the material in all directions. However, in order to meet the terms of the claims, it is proposed to substitute the horizontal disc type as in Stoltzfus for the paddle wheels in Johnson. Such discs should function precisely as in applicant's device.

Applicant also takes exception to the fact that Johnson fails to provide "a central U-shaped open bottom housing about the discharge end of the hopper body". While the difference is observed, it is also obvious that the two vertical, parallel plates 36, 37 provide the attached side parts and Fig. 1 shows an inclined cover above the discharge opening and also above the hoppers and rotary impact members. This cover, with the sides 36, 37, provides the full equivalent of the inverted U-shaped housing.

If the members 33, 34 and 35 be removed and a pair of discs 12 as in Stoltzfus be substituted therefor, the bottom would be as freely open as is the central section in applicant's device.

(141) Applicant also endeavors to draw a line of distinction between the references and applicant's device on the theory that the former are in fact a **distributor mechanism per se,** while applicant's device is merely an "attachment". This distinction is not clear and the Examiner is unable to follow applicant's contention. In any event, both devices are attached to a body or frame and may obviously be detached simply by removing nuts and bolts. Such distinctions as exist are considered well within the limits of mechanical design and skill and not of patentable significance.

The sketch from a photostat of Johnson's device explains nothing not clearly disclosed in the reference in its unlabeled form. There is a sloping top shown in Fig. 1. Material hitting the top of shroud 48 is deflected downward and outward, but where applicant finds "in only once place" is not seen. Applicant's contention that a gap exists in the Stoltzfus canopy is not borne out by the description; and, even though it were, there would be no invention in making the canopy continuous.

The allegations that the interior of the housings are filled to saturation with "airborne material" relate to function or result which is somewhat hypothetical, and at most seems a matter of degree. In any event, the same result should obtain by substituting horizontal disc scatterers as in Stoltzfus for the rotary paddles in Johnson's device. See, however, Fig. 5 in Johnson's disclosure showing means for sucking air from outside for rendering material airborne.

(142) The secondary folding of the extension 36 of Fig. 2 finds favorable response in the outward hinged sec-

tions in Hoffstetter. To similarly add outer extensions to the end of the shrouds 48 in Johnson is considered an obvious expedient for a mechanic familiar with the art.

In view of the foregoing considerations, applicant's argument fails to convince the Examiner of any error of judgment in the combination and application of the references as applied to the individual claims in the previous rejection thereof and further repetition at this time is considered unnecessary.

Claims 1, 2, 18, 19, 20, 23 and 25 stand rejected as unpatentable over Johnson, taken with the depending apron or canopy 21, and if desired the discs 12 in lieu of the paddle wheels 33, 34, disclosed in Stoltzfus, for reasons fully discussed above, in addition to the reasons set forth in the previous Office action.

Claims 3 and 17 stand rejected as substantially met by Johnson for reasons fully set forth in the previous Office action.

Claims 4, 5, 6, 16, 21, 22 and 24 stand rejected as unpatentable over Johnson in view of the outwardly tapered, hinged, foldable outer sections 20, 21 in Hoffstetter for reasons of record and also discussed hereinabove.

Claims 26, 27 and 28 stand rejected as unpatentable over Johnson, taken with the horizontally mounted scattering discs 12 and depending canopy 21 in Stoltzfus, as applied to (143) claims 1, 2, 23, etc. above, and with the tapered, hinged housings 18 in Hoffstetter, as applied to claims 4, 16, 24, etc., hereinabove, and for reasons fully set forth in the previous action.

Claims 1, 2, 3, 4, 5, 6, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27 and 28 stand rejected.

Claim 7 stands allowed.

THIS REJECTION IS MADE FINAL.

Examiner

L/ms

(144)

AMENDMENT DATED AUGUST 13, 1951
SPECIAL

Cincinnati, Ohio

Hon. Commissioner of Patents
Washington 25, D. C.

Sir:

This is in response to Official Letter dated July 10, 1951.

Please amend as follows:

In Claims 1, 2, 3, 4, 5, 6 and 16, please cancel those portions of the first two lines of each claim which read as follows:

> A spreader attachment for a pulverulent distributor of the type characterized by

and insert in lieu thereof:

> An attachment for converting a conventional mobile rotary disk-type spreader for free-flowing solid materials into a spreader for pulverulent material such as phosphate, wherein the conventional spreader includes

Please cancel without prejudice and without admitting anticipation the following claims: 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27 and 28.

Please add the following new claims:

(145) 29. An attachment for converting a conventional mobile disk-type spreader for free-flowing solid materials into a spreader for pulverulent material such as phosphate, wherein the conventional spreader includes a material hopper having a discharge port at the rear end of the spreader, and a rotary disk-type material distributor which projects beyond and is secured to the rear end of the spreader and is positioned below the discharge port, means for discharging material from the hopper through said port and onto the rotary distributor disk, and means for rotating the

distributor disk for distributing free-flowing solid material discharged thereon in all radial directions by centrifugal action; the said attachment comprising a central portion consisting of rigid imperforate front, top and rear walls which exclude the passage of air therethrough, the central portion being open at its bottom, and along its opposite ends, means for securely though detachably securing the central portion on the rear end of a conventional spreader to completely enclose the discharge port and the distributor, a pair of similarly formed elongated, hollow and interiorly unobstructed end portions each including imperforate connected together front, top, rear and end walls, said end portions being (146) unobstructedly open at their bottoms, the length of each end portion being greater than the length of the central portion, means hingedly connecting the end portions to opposite ends of the central portion for substantially vertical movement between lowered operative and raised inoperative positions relative to the central portion, said end portions when in lowered position combining with the opposite ends of the central portion to define an elongated open-bottomed chamber containing the conventional discharge port and rotary distributor in the central portion thereof, flexible imperforate means depending from the lower bottom-defining edges of the individual central and end portions and substantially conforming in outline to the open bottoms of their respective central and end portions for enlarging the effective area of said chamber, the flexible means having extreme free and unobstructed lower edge portions which define an unobstructed open bottom of the enlarged chamber, whereby upon rotation of the distributor and discharge of pulverulent material from the port onto the distributor, the pulverulent material is rendered airborne solely by the action of said distributor, and the material which is thus airborne accumulates, concentrates and entirely fills the enlarged chamber, thus (147) resulting in a substantially uniform and continuous gravitational discharge of the pulverulent material throughout the entire length and breadth of the open bottom of the enlarged chamber directly onto the ground within the confines of the chamber as defined by the said lower edge portion of the flexible means, and means for supporting said end portions in lowered operative position or in raised inoperative position relative to the central portion.

30. An attachment for a convenient spreader as defined in and by Claim 29 wherein the overall length dimension of each end portion is from one to three times the overall length of the central portion and wherein the width of each end portion converges uniformly from the central portion to the end of each portion to a width of from one-half to one-fourth the width of the central portion.

31. An attachment for a conventional spreader as defined in and by Claim 29 wherein each end portion is subdivided intermediate its ends for defining inner and outermost parts, means hingedly connecting the top walls of said inner and outermost parts for substantially vertical movement between lowered operative and raised inoperative positions, said outermost parts foldable back onto the innermost part (148) when in operative position.

REMARKS

Applicant's attorney wishes to thank the Primary Examiner, Mr. A. J. Goldberg, for the courteous interview extended the writer and his Washington associate, Mr. Luke A. Mattare, on Thursday, July 26, 1951, at which time a claim quite similar to newly presented claim 29 was briefly discussed. During the interview the fact that applicant's device is an **ATTACHMENT** for a so-called standard or conventional limestone spreader was emphasized.

Highly pulverulent materials, such as Super Phosphate, present almost insurmountable distribution problems, and prior to applicant's contribution to the art special devices were devised for spreading such material.

Applicant's **attachment** enables pulverulent material such as Super Phosphate to be economically, efficiently, and inexpensively spread onto any type field, during any kind of weather, from a **conventional limestone spreader!** In order that there may be no misunderstanding or uncertainty as to the structural details of a conventional limestone spreader, applicant has clearly defined such a limestone spreader in the introductory portion of the newly submitted claims — and has also amended the terminology found in the first two lines of each of Claims 1, 2, 3, 4, 5, 6 and 16, whereby to more clearly define a conventional limestone spreader with which the instant **attachment** is associated for **CONVERTING** the conventional spreader to a spreader for pulverulent material.

(149) Each of the newly submitted claims 29, 30 and 31 has been carefully drafted and is submitted for materially reducing the number of claims in the application, said new claims embodying the essential features of the cancelled claims.

Applicant submits herewith an affidavit of Ray F. Hatala to the effect that pulverulent phosphate (Super Phosphate) has been commercially available since 1890 and that commercial impeller-type limestone spreaders have been widely used in the U. S. for the past 18-20 years for spreading free-flowing solid materials such as limestone, sand, etc.; that **for lack of better means** commercial limestone spreaders were used to spread pulverulent phosphate although such methods were highly unsatisfactory and uneconomical.

Hatala further states that the **attachment** of applicant enables super phosphate to be **rapidly**, **effectively** and evenly spread, in a manner analogous to painting, directly onto the ground **from a standard or conventional limestone spreader.**

Hatala concludes his affidavit by stating that applicant's "**attachment** for converting a standard limestone spreader to a spreader for pulverulent material such as Super Phosphate has **simplified and revolutionized** the technique of distributing pulverulent material such as Super Phosphate."

The Hatala affidavit was prepared by applicant's attorney from the information obtained directly from affiant.

(150) It is respectfully requested that newly submitted claims 29, 30 and 31 be entered as well as the amendments to each of Claims 1, 2, 3, 4, 5, 6 and 16 in order to place the claims of the application in better condition for appeal.

Since the Primary Examiner has indicated that no argument presented on behalf of applicant would alter his opinion as to the propriety of the final rejection of July 10, 1951, applicant files concurrently herewith a notice of appeal.

Respectfully,

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Attorney for Aubrey L. Jones

(151)

AFFIDAVIT

STATE OF ILLINOIS
SS.
COUNTY OF LASALLE

RAY F. HATALA, being first duly cautioned and sworn, deposes and says:

That he is, and for the past 17 years has been, an employee of the Anthony Company, Streator, Illinois, manufacturers of equipment for motor trucks, tractors, transportation, contractors and farm use, and during the progress of the Spreader development in the last ten years has been employed in varying capacities, including working in the Development Department, Project Engineering and Sales Engineering on the Limestone Spreader for the Anthony Company, and

That Super Phosphate has been commercially available since 1890 for agricultural purposes, Super Phosphate being a pulverulent, finely powdered substance which presents formidable distribution problems while being spread onto the ground, and

That commercial impeller-type limestone spreaders have been widely used in the United States for the past 18 to 20 years for spreading free-flowing solid materials such as (152) limestone, chips, cinders, sand, etc., and

That since his connection ten years ago with the Limestone Spreader Department of the Anthony Company he has been keenly aware of the problems and difficulties encountered in economically and efficiently spreading Super Phosphate in bulk onto fields, and

That prior to the introduction of the Aubrey L. Jones attachment for commercial limestone spreader in 1948 no efficient, inexpensive means was available for spreading highly pulverulent material such as Super Phosphate. However, Super Phosphate was commercially spread, in bulk, for lack of better means, by conventional limestone spreaders. Such method was highly unsatisfactory and uneconomical because the distribution pattern could not be controlled since the phosphate would be discharged as a billowing mass of fine, powdery material over which there was no control, and

That the attachment of Aubrey L. Jones, as more fully set forth in the presently pending Jones patent application Serial No. 95,114, filed May 24, 1949, entitled "APPARATUS FOR AND METHOD OF DISTRIBUTING PULVERULENT MATERIAL", enabled Super Phosphate to be rapidly, effectively and evenly spread, in a manner analogous to painting, directly onto the ground from a standard or conventional limestone spreader, and

That the said Jones attachment for converting a standard limestone spreader to a spreader for pulverulent (153) material such as Super Phosphate has simplified and revolutionized the technique of distributing pulverulent material such as Super Phosphate.

Further affiant saith not.

/s/ Ray F. Hatala

Sworn to before me and subscribed in my presence this 14th day of August, 1951.

/s. Loretto M. Mulcahy
Notary Public in and for
LaSalle County, Illinois

(154)

NOTICE OF APPEAL DATED AUGUST 16, 1951

Cincinnati, Ohio

Hon. Commissioner of Patents
Washington 25, D. C.

Sir:

Applicant hereby appeals to the Board of Appeals from the decision of the Principal Examiner finally rejecting Claims 1, 2, 3, 4, 5, 6, 16, 29, 30 and 31 in the above entitled application.

Check No. 3264 in the amount of $15.00 to cover the statutory appeal fee is submitted herewith.

An oral hearing is requested.

Respectfully,

....

Attorney for Aubrey L. Jones

OFFICIAL LETTER DATED AUGUST 28, 1951

(155)

Responsive to proposed amendment filed Aug. 17, 1951.

The amendment has been entered for the purpose of appeal, as requested.

There is recognized no patentable distinction in the amended preamble of claims 1, 2, 3, 4, 5, 6 and 16 from their original forms. As interpreted, each statement vaguely relates to an attachment for a distributor for pulverulent material. Such mechanical distinctions, if any, would involve nothing more than problems of design and expediency in providing means for readily attaching and detaching a spreader or distributor unit to a material conveying body.

The essential features are shown to be old from the art of record.

The affidavit by Ray F. Hatala has been noted.

Claims 1, 2, 3, 4, 5, 6, 16, 29, 30 and 31 stand finally rejected.

Examiner

L/ms

(191)

EXAMINER'S STATEMENT DATED MARCH 5, 1952

This is an appeal from the final rejection of claims 1, 2, 3, 4, 5, 6, 16, 29, 30 and 31.

Claim 7 has been indicated allowable.

A correct, though somewhat irregular, copy of the appealed claims appears on pages 15 through 21 of applicant's brief.

In view of the irregular style of presentation, however, claim 1 is rewritten for convenience in regular style as follows:

> An attachment for converting a conventional mobile rotary disk-type spreader for free-flowing solid materials into a spreader for pulverulent material such as phosphate, wherein the conventional spreader includes a hopper having a discharge port and substantially horizontally disposed rotatable impeller means carried by a substantially vertically disposed shaft for rendering airborne particles of material discharged thru said discharge port, said attachment comprising a central portion dimensioned to enclose the discharge port and said impeller means, said central portion including front, top and rear walls, and a pair of end

portions each including front, top, rear and outer end walls, said end portions hingedly secured to said central portion for movement between lowered and raised (192) positions relative thereto, said end portions when in lowered position combining with said central portion to define an elongated unobstructed open-bottomed chamber within which chamber pulverulent material from said hopper is rendered airborne due to rotation of the said impeller means and will accumulate in sufficient concentration to effect a substantially uniform gravitational depositation thru said open bottom without any appreciable blow away of the material and thus effect a uniform application of the material on the ground, means for securing said central portion to the hopper of a pulverulent distributor, and means for rotating the impeller shaft.

The references relied on are:

Johnson (Great Britain)	584,809	Jan. 23, 1947
Stoltzfus	2,281,212	Apr. 28, 1942
Hoffstetter	2,500,681	Mar. 14, 1950
		(Filed July 29, 1946)

Litchfield et al, 1,668,516, is not relied on in view of Hoffstetter.

DESCRIPTION OF APPARATUS.

The invention relates to Apparatus for distributing pulverulent material over an extended surface. More particularly, the device relates to a distributor adapted to be attached to and carried by the discharge or rear end of the bed of a conventional fertilizer-conveying vehicle and is especially adapted for uniformly distributing or spreading finely powdered limestone and/or phosphate fertilizer over an extended area in the wake of and for a predetermined distance on each side of the moving vehicle across a field. An outstanding characteristic of the device, which the invention as understood is supposed to encompass, is the alleged "non-mechanica" or "airborne" feature whereby the uniform or even distribution of the (193) powdered material resulting from the assembly disclosed is effected.

The structural features of the assembly or distributing attachment comprise an inverted, substantially U-shaped shroud or housing adapted to be secured to and carried by the rear end of a vehicle body, said distributor or housing comprising a central portion 20 and a pair of end portions 22 hinged at their inner ends to the outer ends of the central portion and selectively movable relative to the central portion between raised inoperative and lowered operative positions. (Figures 1-7).

Referring to Fig. 1, the reference numeral 10 indicates the body or storage hopper of a vehicle commonly used in distributing powdered or granular fertilizer. Along the bottom or bed of the hopper may be provided an endless belt, gate, or a screw conveyor (not disclosed) for feeding material rearwardly and through an outlet opening 12 (Fig. 4) and onto a conventional distributor, spreader, or impeller, in the instant device a rotary disc 14 being disclosed. The disc 14 may be driven at high speed by any conventional and well known power means (not disclosed).

It is noted, further, that "the present invention is not directed to nor concerned with the structural details of the hopper, conveyor or impeller" (see the last paragraph on page 7). Note, further, the second full paragraph on page 11 of the specification wherein it is stated that "Uniformly, (194) phenomenal results have been obtained from my device regardless of the particular type of 'spreader' to which they (it is) are attached".

It will be further noted in the last paragraph on page 8 that the central portion 20 is attached to the truck body or hopper by means of any "suitable structural members which are proportioned to engage parts of the hopper, being securely though releasably fastened thereto by means of bolts or other suitable fastening means". Such securing members are not disclosed.

The central portion 20 of the spreader attachment, best shown in Fig. 4, is generally U-shaped in cross section and comprises a rear wall 26, a top wall 28 and a front wall 29, and is dimensioned to enclose the discharge port 12, and impeller 14. It is further mentioned that for some purposes two or more impellers may be provided.

In Figs. 2, 3 and 7 it will be noted that each of the hingedly attached end portions 22 is generally U-shaped in transverse cross section and includes rear, top, front and end walls 30, 32, 34 and 36, respectively, the width dimension of each end portion adjacent the central portion being substantially equal to the width dimension of the central portion, but diminishing outwardly to a minimum adjacent its outer end or wall.

Preferably, a depending apron 50, fabricated from canvas or other flexible material, is secured to the lower periphery of each of the central and end portions, wherein (195) the lower edge 52 thereof terminates adjacent to but in spaced relationship from the surface of the ground.

A baffle 60 pivotally attached at 64 (see Figs. 1, 3 and 7) is provided to eliminate stratification due to moist lumpy balls or pellets.

A modification is illustrated in Fig. 8 wherein the outer ends of portions 22 have hingedly attached thereto at 80 what may be termed "outer end portions" uniformly tapered beyond the intermediate end portions and foldably attached to said intermediate end portions.

DISCUSSION OF REFERENCES

Johnson (Brtish):

It will be noted at the outset that Johnson has solved the same problem of uniformly distributing powdered lime, superphosphates, nitro chalk and like dry powdered fertilizers over the ground and is considered the basic reference structurally and functionally, and is relied on wholly or in combination with Stoltzfus and/or Hoffstetter in anticipation of the claims under final rejection. Johnson, as well as the other references, is discussed "with pertinent observations on behalf of and favorable to applicant" (page 6 of Brief). Though this reference along with Stoltzfus and Hoffstetter were discussed in their pertinent features of application to the claims **then** under consideration in paper #15, the later introduction of the more prolix claims 29, 30 and 31 together with (196) amendments to the preamble of the other claims in the case renders further details comment desirable in amplification of paper No. 18, because what was somewhat lightly considered as of the Jepson type of claim appears now to become unduly magnified as one of the features relied on by applicant; viz., that the device of the instant application not only comprises a central portion 20 of inverted U-shape and of uniform cross section with the opposite ends of which the sections 22 form a continuous shield or shroud when in lowered or operative position, but that the spreader is adapted for **attachment** to an ordinary type of vehicle body which could be used with other kinds of manure of less finely comminuted particles, as lime or phosphates. The issue, then, appears to depend mainly on the above features. However, the type of scattering element and also the depending apron of canvas are also challenged, since it was necessary to substitute a horizontal rotary disk mounted on a vertical axis and the depending canvas apron as taught by Stoltzfus in lieu of the horizontal axes for the rotary impact members 33, 34, 35 in Johnson's device, and to combine the foldable tapering type troughs or housing 19, 20 in Hoffstetter's device in certain claims.

Referring to the above alleged divergencies of the instant device from the reference to Johnson, it will be observed that Johnson does not provide a geometrical duplication of applicant's removable, inverted trough shaped central shroud 20, but instead there are provided front and rear transverse (197) plates 36, 37 rigidly held in spaced position relatively to one another by a series of connecting bolts 38 bridging the space between the plates and forming with the plates a framework for the unit. **"This framework is rigidly affixed to the chassis of the machine through the intermediary of brackets 38a (Fig. 1) and other connecting members (not shown)"**. Above the plates 36, 37 and frame is a sloping roof-like structure (not identified), best shown in Fig. 1. These structural members enclose the rotary impact members 33, 34, 35 (see Figs. 3 and 4). Between the plates 36, 37 are two pair of downwardly converging deflector plates 45, 46 for directing powdered lime, etc., from the discharge opening in the supply hopper to each of the impact members 33, 34.

The two impact members 33, 34 are each provided with a laterally extending shroud or inverted trough shaped member 48, similar to applicant's members 22, each symmetrically arranged on either side of the transverse plates 36, 37 beneath which opposing streams of powdered fertilizer is projected by the respective impact members, 33, 34. The third impact member 35 is provided for uniformly spreading any material dropping through the impellers 33, 34.

"The shrouds 48 are pivotally connected at 68 to trunnion brackets 69 projecting laterally from the upper corners of the end plates 36, 37 of the distributor unit, as shown clearly in Fig. 3, to swing upwarly to an inoperative vertically (198) disposed position" (see Fig. 2). At the outer end of each shroud is provided a baffle 70, which may be adjustable, operative to limit the maximum distance of projection of the fertilizer along the shroud, "thereby enhancing the substantial **uniformity** of the lateral boundary of the deposit of fertilizer on the ground. See page 6, col. 2, lines 105-130).

While Johnson has provided the general combination of inverted, removable U-shaped shrouds extending laterally from opposite open ends of a central housing which is apparently removable and enclosing impeller elements for projecting streams of finely powdered fertilizer uniformly over the ground in predetermined width on either side of a movable vehicle, so that the material will not be seriously disturbed by normal wind currents before it reaches the ground, the Stoltzfus device solves a similar problem by providing a surrounding canopy comprising curtains 21 enclosing the discharge spouts and a pair of flat rotary scattering discs 12 and extending near the ground. Certain claims which specify the horizontal disc scatterer and depending apron, are rejected on Johnson in view of the Stoltzfus disclosure, on the ground that the type of scattering disc is of common knowledge as is also the depending apron, and that there would be no invention merely in substituting a flat rotary disc in lieu of the paddle type impellers of Johnson's device nor in adding a curtain about the lower peripheral edges of the central frame and lateral shrouds in Johnson's device if so desired. Moreover, those claims (199) which specify intermediate and outerfoldable members, as 22, 36 shown in Fig. 8 of the instant disclosure, are deemed to find equivalent features in the foldable outer sections 27 in Hoffstetter when hinged to the outer ends of Johnson's shrouds 48. The tapering contour of the troughs or distributing extensions is also shown in Hoffstetter; and, while not tapering in the same plane as applicant's members 20, 22, such tapering is considered merely a matter of choice and mechanical design not deemed to involve invention.

DISCUSSION OF CLAIMS

In the final rejection of July 10, 1951 (paper No. 15), the above suggested combinations of the references were applied to the then presented claims, all of which were finally rejected except claim 7, which stands allowed because of the intermediately located baffle 60 (Fig. 7).

In applicant's amendment and request for reconsideration, filed Aug. 17, 1951 (paper No. 16), certain of the finally rejected claims were canceled and others (claims 1, 2, 3, 4, 5, 6 and 16) amended by adding to the preamble stressing the attachment feature, while newly presented claims 29, 30 and 31 were added for consideration and/or appeal, the last three being obviously prolix and relating to function or result allegedly achieved by the instant device.

Though applicant apparently later discovered the importance of emphasizing the attaching feature of the spreader "for converting a conventional mobile rotary disk-type spreader for free-flowing solid materials into a spreader for pulverulent (200) material such as phosphate", etc., it is noted that the disclosure of the so-called attaching means for effecting such "conversion" was barely mentioned and its relative importance lightly passed over in the brief remarks confined to the last six lines on page 8 of the specification, the "suitable structural members" not even identified by reference numerals, similar to the negligent manner in which Johnson proposes to rigidly secure his frame supporting the impact members and shrouds to the chassis of his vehicle (see p. 5, col. 1, lines 17-33 of Johnson's specification). However, it is well known that distributing units of the rotary disc type are commonly removably attached to the open ends of vehicle bodies in lieu of the tail gates for converting same into a distribuitng vehicle, and it is believed reasonable to assume from the brief description that Johnson's vehicle is also of the conversion type when used as a distributor for powdered lime, super phosphates, nitro-chalk and like dry powdered fertilizers; therefore, the conversion feature by virtue of the attachable unit lacks patentable significance if not fully anticipated by the Johnson distributor machine.

Similiarly, the importance of the flat disc type of propeller 14 was not accentuated in the original disclosure, and this, too, is considered a matter of choice, each type disclosed by applicant and also by Johnson being common in the art, but more commonly found in use is the disc type disclosed by applicant. However, it is believed that the (201) positive impeller type shown in Johnson's device would be equal if not preferable to the horizontal disc, since the impeller blades of Johnson's device would not leave to some unexplained theory (see lines 13-17 on page 11 of applicant's specification) the positive and forceful direction of the powdered material along the trajectories defined by the shrouds in Fig. 5 of Johnson's device.

Nor is the provision of a depending curtain or apron for the lower edges of the shrouds and central portions of Johnson's distributor considered of patentable significance in view of Stoltzfus, but merely the obvious addition and use of a well-known expedient.

The only remaining feature not fully disposed of is the uniformly symmetrical U-shaped central portion 20 in applicant's device. While the difference between this central portion 20 of applicant's device and the central inclosure bounded by front and rear walls 36, 37 and sloping cover (Fig. 1) of Johnson's device is recognized, it is held that the mere **shape** of the central structure is a matter of choice and mechanical design and not of patentable moment. It is obvious that the space enclosing the impact blades is enclosed on front, rear and top, with open ends which freely communicate with the similar inverted U-shaped shrouds 48; that the result achieved is similar, and therefore any number of mechanical designs of varying contour to form the cover for the central section could be utilized without any appreciable variation in the results attained by use of the inverted shrouds and curtains. Hence, (202) the central U-shaped section in applicant's device is considered to find its full equivalent in the Johnson device.

On the basis of the foregoing general applications of the pertinent references, the claims stand finally rejected as follows:

Claim 1 is considered unpatentable over Johnson in view of the flat type of rotary scattering discs shown in Stoltzfus.

Claim 2 is considered unpatentable over Johnson in view of the depending curtains 21 shown in Stoltzfus.

Claims 3 to 6, inclusive, are also considered unpatentable over Johnson in view of the uniformly outwardly tapering housings 19, 20 shown in Hoffstetter. Though the tapering is in a vertical plane rather than in the horizontal plane, the outward tapering and the relative dimensions of the several sections are, obviously, matters of choice and design and are not considered patentable limitations.

Claim 16 is likewise considered unpatentable over Johnson in view of the tapered, hingedly attached end portions 20 in Hoffstetter. To hingedly attach additional folding portions of uniform taper to the outer ends of shrouds 48 in Johnson, and to uniformly taper such shrouds 48 in Johnson would require no more than the expected skill of a mechanic familiar with the art of record.

Claims 29, 30 and 31 are prolix in character and do not recite any positive structure not sufficiently embodied in the preceding claims; though these claims are not considered (203) patentable over the references as applied above to claim 16 (see paper No. 18) but were admitted for the purpose of appeal, such claims in addition to rejection on the references as above applied to claim 16 are further considered not allowable because of prolixity due to allegations relating to results achieved.

In view of the foregoing, it is considered that the rejection of all claims at issue was proper and the final rejection should be sustained.

Respectfully submitted,

Examiner, Division 1.

L/ms

(205)

REPLY BRIEF ON BEHALF OF APPLICANT DATED MAY 2, 1952

Pursuant to Rule 193 (b), as revised April 1, 1952, 657 O.G. page 7, applicant submits herewith a reply directed to certain points raised in the Examiner's statement. At the outset it should be noted that this reply is NOT for the purpose of having the application returned to the Examiner, but solely for the purpose of denying certain statements appearing in "Examiner's Statement", lest failure to deny be construed as an admission on the part of applicant.

ATTACHMENT

Judicial notice may be taken, contrary to Examiner's statement, that applicant stressed his device as an "**attachment**" for a conventional spreader from the outset — in seven of the ten "objects", as originally filed, an **ATTACHMENT** is called for.

Judicial notice may be likewise taken that in seven of the eight claims originally filed, a spreader **attachment** for a pulverulent distributor was called for.

(206) SPREADER

The Examiner's attempt to distort applicant's clear meaning of what is meant by a "spreader" is challenged. On page 7 of the specification, line 19 through page 8, line 1, we find:

> "For detail and clarity of understanding, the Baughman patent No. 2,120,169 dated June 7, 1938, may, by way of example, be referred to as illustrating a typical commercial device of the so-called 'spreader' or limestone spreader as the term is used herein."

The statement appearing on page 11 is **not** contrary to the above, since on page 11, lines 11-17, applicant is merely referring to spreaders **of the Baughman type** such as might be manufactured by others, to wit: New Leader Company, Anthony, etc.

Applicant specifically denies Examiner's statement appearing in lines 11-14, page 10, of the Examiner's statement, and also the statement on the last line of page 10 through the first seven lines on page 11.

The purpose of this reply brief is not to argue these matters but, as earlier indicated, merely to register applicant's sincere yet vigorous objections to certain of the Examiner's statements.

Respectfully,

....

Attorney for applicant,
Aubrey L. Jones

(207)

DECISION OF BOARD OF APPEALS DATED JANUARY 30, 1953

This is an appeal from the final rejection of claims 1 through 6, 16, 29, 30, and 31. Claim 7 have been allowed.

Claim 5 is illustrative and reads as follows:

5. An attachment for converting a conventional mobile rotary disk-type spreader for free-flowing solid materials into a spreader for pulverulent material such as phosphate, wherein the conventional spreader includes a hopper having a discharge port and rotatable impeller means for rendering airborne particles of material discharged through said discharge port and means for rotating the impeller means, said attachment comprising a central portion dimensioned to enclose the discharge port and said impeller means, said central portion including front, top and rear walls, and a pair of end portions each including front, top, rear, and outer end walls, wherein the width of said end (208) portions adjacent said center portion is substantially equal to the width dimension of said center portion, said width being of a dimension from two to four times greater than the width of said end portions adjacent their outer ends, said end portions hingedly secured to said central portion for movement between vertical lowered and raised positions relative thereto, said end portions so proportioned that when in lowered position they combine with said central portion to define an elongated open-bottomed chamber within which chamber pulverulent material from said hopper is rendered airborne due to the rotation of the impeller means and will accumulate in sufficient concentration to effect a substantially uniform gravitational depositation through said open bottom without any appreciable blow away of the material and thus

effect a uniform application of the material on the ground, and means for securing said central portion to the hopper of the pulverulent distributor.

The references relied upon are:

Stoltzfus,	2,281,212,	Apr. 28 1942,
Hoffstetter,	2,500,681,	Mar. 14, 1950,
Johnson (Great Britain),	584,809,	Jan. 23, 7947.

The invention relates to an attachment for a conventional limestone spreader which converts it into a distributor for finely pulverized material, such as phosphate. The attachment comprises a housing structure formed of three parts, with the two outer parts pivoted to the center part, with the two outer parts pivoted to the center part which is, in turn, attached to the rear portion of the truck bed or hopper of the conventional limestone spreader by any suitable means. As the pulverulent material is discharged from the truck body, it is directed by a horizontally arranged impeller in two directions transversely of the truck body within the enclosed housings in an airborne cloud which settles on the ground below the open bottom end of the housings.

The patent to Johnson discloses a machine for spreading dry powdered fertilizers, such as superphosphates. It comprises a housing structure formed in three parts, in (209) which the two outer parts and hingedly connected to the central part which is, in turn, attached to the rear end of the chassis of the vehicle to which the spreader is attached. The central portion carries a plurality of vertically arranged impellers which direct the finely divided powdered material in two directions at right angles to the path of the vehicle within the housings from which the finely divided material settles on the ground.

The patent to Stoltzfus relates to a material spreader for spreading fertilizer in the form of lime, compost, etc., uniformly over the ground. It comprises a housing structure adapted to be attached to the rear end of a conventional type vehicle provided with a pair of horizontally arranged impellers which project the material at right angles to the path of the vehicle, while the housing prevents the wind from unduly affecting the uniform distribution of the material on the ground.

The patent to Hoffstetter also relates to fertilizer spreaders adapted to be mounted on the rear end of a vehicle frame. The spreader comprises a three-part tapering housing in which the two outer parts are hingedly mounted on the central part which is secured by fastening members to the vehicle frame.

Claims 1 through 6, 16, 29, 30, and 31 stand rejected as unpatentable over the prior art. The Examiner considers that the patent to Johnson is the basic patent, while he relies upon the Stoltzfus patent to show the use of a horizontally rotating impeller and the Hoffstetter patent (210) to disclose the use of outwardly tapering housings. The Examiner's position is that no invention is involved in using horizontally rotating impellers to spread the material as shown by Stoltzfus, in place of the vertically rotating impellers for spreading the material shown by Johnson, or in using outwardly tapering hinged housings as shown by Hoffstetter, in place of the outwardly hinged housings shown by Johnson, which are not shown as tapering in form.

Appellant stresses that each of the claims calls for an attachtment which comprises three essential elements, that is, a central portion and a pair of end portions in which the central portion encloses the discharge port of the vehicle and the impeller means, while the end portions are hingedly connected to the central portion. We consider that each of the patents to Johnson, Stoltzfus and Hoffstetter, clearly discloses a structure having similar elements which, in our opinion, comprise an attachment to the vehicle body to which the spreader is attached. Appellant stresses that an object of his invention is to provide a device which may be easily attached to, or detached from, a commercially available or standard spreader-type truck bed. In our opinion, the spreaders shown in all three of these references are clearly attached to a commercially available truck bed, with which they are used to spread material carried by the truck body. All three references clearly state that the spreaders or distributor devices may be readily mounted on a conventional type of motor vehicle to be carried thereby, and, in our opinion, no invention is involved in using any (211) particular means to connect the spreader or distributor of these devices to the truck bodies with which they are used.

Appellant stresses that these references are not intended as an attachment for an existing pulverulent material distributor, but comprises a distributor mechanism, per se. We have carefully considered appellant's contentions in this respect, but are constrained to agree with the Examiner that the spreaders or distributors of the references all comprise devices which are attached to a conventional vehicle body, and thus comprise an attachment within the meaning of the term as used in these claims.

Appellant further contends that the Examiner is improperly combining these references, since there is no suggestion in the references as to how they can be combined and that, even if they were combined as suggested by the Examiner, the proposed combination would still not meet the claims under rejection. We have considered appellant's contention in this respect, but agree with the Examiner that it is obvious and devoid of invention to substitute the horizontally rotating impellers of Stoltzfus for the vertically rotating impellers shown by Johnson, and further, that no invention in involved in tapering the extending housings of Johnson, as shown by Hoffstetter. The claims under rejection do not, in our opinion, define invention over the combination of references proposed by the Examiner.

Appellant also contends that the structure disclosed by Johnson could not possibly be used for spreading a fine (212) pulverulent material, such as is adapted to be spread by appellant's spreader, yet Johnson specially states that his invention relates to spreaders for spreading superphosphates which is the material to which appellant repeatedly refers throughout his arguements as the material with which his spreader is intended to be used. Appellant's contention is that the structure shown by Johnson would not permit proper distribution of such finely divided pulverulent material. We do not agree with appellant in this respect, since we consider that the structure shown by Johnson not only could be used for distributing such finely divided pulverulent material but is actually disclosed as being used for this purpose and we find nothing in the structure therein which, in our opinion, would render the device inoperative for the purpose for which it is intended.

Appellant further points out that Stoltzfus makes no reference in his disclosure to the use of his device for spreading pulverized material such as superphosphates. However, appellant's original application likewise fails to mention the spreading of superphosphates, although it does mention phosphate. Johnson, however, specially mentions superphosphates as one of the materials that his device is intended to spread.

Appellant further points out that the patent to Stoltzfus does not provide a closed housing and that the material, therefore, would not be uniformly distributed beneath the enclosed housing due to this fact. We have considered appellant's contentions in this respect, but agree (213) with the Examiner that the details of the size, shape and proportions of the housing parts are matters which in no way define invention as set forth in this application, since they are mere differences in design within the skill of the ordinary skilled worker in this art. While in Johnson, the impellers are arranged vertically and not horizontally as set forth in the claims, we do not consider that this is a patentable distinction, since we agree with the Examiner that the impellers of Johnson act upon the fine particles to project them in either direction within the housing and thus create a suspension or cloud of particles which settles on the ground below the open part of the housing as the vehicle progresses over the ground. Johnson clearly states that the impellers create an air stream which carries with it at least the finer particles of the stream of fertilizer and hence, clearly comprises a structure in which the fertilizer particles are airborne as stated by appellant. This subject matter is disclosed in lines 15 through 21 of page 7 of Johnson.

While both Johnson and Stoltzfus disclose a pair of impellers instead of a single impeller as disclosed by appellant, we consider that whether one or two impellers are used is a mere matter of choice or design not involving invention, especially inasmuch as appellant, on page 8 of his specification, clearly pointed out that spreader devices having two or more impellers could be provided instead of the spreader device having only one impeller as shown in his (214) Figs. 1 and 4. We will, therefore, sustain the Examiner's rejection of the claims as unpatentable over the prior art.

We have carefully considered the affidavit filed in this application by Ray F. Hatala, but find nothing therein which convinces us that the Primary Examiner was in error in rejecting the claims as unpatentable over the prior art.

We have carefully considered all of the contentions and arguments in appellant's brief, as well as those presented at the hearing, but we are not convinced thereby that there was reversible error in the rejection of the appealed claims.

The decision of the Primary Examiner is affirmed.

C. S. DUNCOMBE
Examiner-in-Chief
HARVEY E. KAUFFMAN
Examiner-in-Chief
(Acting)
J. E. GONSALVES
Examiner-in-Chief
(Acting)
BOARD OF APPEALS

January 30, 1953

Dated this 11th day of August, 1944.

G. F. REDFERN & CO.,
Chartered Patent Agents,
Redfern House, Dominion Street,
London, E.C.2.
Agents for the Applicant.

COMPLETE SPECIFICATION

Improvements in or relating to Spreaders for Fertilisers and the like

I, Hubert Cecil Johnson, a British Subject, of Dan Hill Farmhouse, Thakeham, Pulborough, Sussex, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to machines for spreading agricultural lime, superphosphates, nitro chalk and like dry powdered fertilisers over the face of the ground, the object of the invention being the provision of such a machine which will spread fertiliser over a large area in a substantially uniform manner.

The invention concerns specifically and solely a machine for spreading fertilisers as referred to. For example, it is in no way connected with machines for spreading sand upon, say, a road surface. Such machines, as is known, are generally concerned with an area bounded by the lateral confines of the machine, whereas a machine for spreading fertilisers is intended to cover a much wider area, considerably exceeding the width of the machine.

According to the invention, a machine for spreading dry powdered fertilisers over the face of the ground, comprises in combination a rotary impact member whose rotational axis is horizontal and parallel to the path of travel of the vehicle and whose action is to project dry powdered material falling into the path of its impact surfaces from a position above said path a considerable distance laterally of the machine, well beyond the lateral confines thereof, the impact member being operable to project the material solely along a path transverse to said path of travel; means for feeding powdered fertiliser carried in a supply receptacle therefor forming part of the machine, to said path of said impact surfaces; and an inverted-U section shroud disposed along the path of projection of the fertiliser so as to shroud the same laterally thereof and above it, beyond said confines of the machine.

According to a preferred form of the invention, there are two rotary impact members as referred to, in the machine, one operable to project the powder to one side of the machine and the other to the other side thereof, and two shrouds as referred to, disposed respectively along the two paths of projection of the fertiliser.

Further according to the invention, there may, with such an arrangement as that described in the preceding paragraph, be a supplementary rotary impact member arranged, as hereinafter more particularly described, to distribute the powder over the part of the ground disposed within the lateral confines of the machine which in the travel of the machine, is not spread or spread sufficiently, with powder by the first-mentioned impact members.

Further according to the invention, the means referred to, for feeding powdered fertiliser carried in a supply receptacle therefor to the path of the impact surfaces of the rotary impact member or members of the machine, preferably consists of a mechanical floor to the supply receptacle, constructed and operable as an endless conveyor, and a feed hopper or hoppers fed with the fertiliser by the floor at a controlled rate and in turn feeding the fertiliser into the path of the impact surfaces of the impact member or members.

The machine may be a hand-propelled or animal-propelled machine. Preferably, however, it is a self-propelled machine with the rotary impact member or members and the mechanical floor (if provided) arranged to be driven by the propelling motor of the machine.

The invention will now be further described with reference to the accompanying drawings which illustrate a preferred embodiment by way of example.

In these drawings:—

Figure 1 is a side elevation of the rear part of the machine with certain parts removed or broken away to show the construction;

Figure 2 is a rear end elevation of the machine with one of the shrouds thereof as hereinbefore referred to, in a raised position as hereinafter more particularly described;

Figure 3 is a fragmentary rear elevation of the machine drawn on a larger scale than Figures 1 and 2 and showing the details of what may conveniently be referred to as the "distributor unit" of the machine, said unit consisting of three rotary impact members as hereinbefore described, two arranged to project the fertiliser beyond the lateral confines of the machine and a third arranged to distribute the fertiliser over the part of the ground within said lateral confines, and two feed hoppers, also as hereinbefore described, respectively feeding the two first-mentioned of the three rotary impact members;

Figure 4 is a vertical cross-section through Figure 3 on the section line 4—4 thereof;

Figure 5 is a rear end view of the machine in action, drawn on a smaller scale than Figure 3 and with certain parts broken away to show how the fertiliser becomes distributed in the use of the machine and the inner end portions of the shrouds;

Figure 6 is a vertical cross-section through one of the shrouds of the machine, taken on the section line 6—6 of Figure 5; and

Figure 7 is a fragmentary view looking in the direction rearwardly of the machine, of the lower corner of the distributor unit appearing to the left in Figure 3, the view showing a possible modification hereinafter more particularly described, according to which air, to form a current of air generated by the rotary impact member in each case and laterally directed, relatively to the path of the machine, along with the stream of powder from the impact member, is drawn into the latter axially thereof by centrifugal action.

Like reference numerals indicate like parts in the various Figures.

The machine shown comprises a self-propelled motor-driven chassis 1 having rear wheels 2 driven by the propelling motor of the chassis, which is not shown, being at the forward end of the chassis, and front wheels, also not shown.

Upon the chassis, in rear of a driver's cabin at the forward end thereof, is a supply receptacle 3 for the fertiliser to be distributed by the machine. As shown, this receptacle is constructed with inwardly converging side walls 4, 5 and the floor of the receptacle is constituted by the upper run 6 of an endless belt conveyor extending in the direction of length of the machine from end to end of the receptacle.

The belt of the conveyor is guided around terminal rollers at the two ends respectively of the belt, the rear roller being shown at 7 in Figure 1. The upper run 6 of the conveyor is supported upon intermediate rollers 8 extending transversely of the machine and spaced at intervals along the run. The lower run 9 of the conveyor is also supported upon intermediate rollers 10, which, however, are less in number than the rollers 8; for example, there may be only two of them, one near the rear terminal roller 7 and another near the front terminal roller (not shown).

The conveyor is arranged to be driven by the propelling motor of the chassis, through the intermediary of a transmission shaft 11 extending from the gear box of the motor to a universal coupling 12, a second transmission shaft 13 extending from the coupling 12 to the distributor mechanism of the machine, hereinafter more particularly described, a countershaft 14 drivingly connected to the shaft 13 through the intermediary of a chain and sprocket connection 15, a differential gear 16 in driven connection with the countershaft 14, a cross shaft 17 in driven connection with the driven shaft of the differential gear 16 through the intermediary of a chain and sprocket connection 18 and a chain and sprocket connection 19 drivingly connecting the cross shaft 17 with the terminal roller 7. Suitable controls (not shown), operable from the driver's seat of the machine, are provided for throwing the driving connection to the conveyor into and out of gear.

As shown, the rear end of the conveyor projects slightly beyond the rear end of the receptacle 3 and where it so projects is arranged to deliver fertiliser to the distributor unit, which is positioned at the rear end of the machine immediately below the rear end as referred to of the conveyor.

Assuming a given rate of operation of the conveyor, the effective rate of delivery thereof is controllable at will by regulation of the degree of opening of a vertically adjustable gate 20 normally closing to a lesser or greater degree according to the degree of opening of the gate, a discharge opening 21 in the lower part of the rear end wall 22 of the receptacle 3. The gate 20 is movable, in its adjustment vertically relatively to the discharge opening 21, in guides affixed to the rearwardly presented face of the end wall 22 and it is moved upwardly and downwardly in these guides by a hand lever 23 (see Figure 5) pivotally connected at 24 to a link 25 in turn connected to the gate 20, the hand lever 23 being fulcrummed at 26 to a link 27 in turn fulcrummed at 28 to the end wall 22 and being capable of being set at any of a variety of angular positions corresponding respectively to a variety of vertical positions of adjustment of the gate 20, by means of a toothed rack 29 on the end wall 22 and a co-operating pawl 30 on the lever.

Within the receptacle 3, extending lengthwise thereof, is an inverted-V shaped baffle 31 mounted on inverted-V shaped bearers 32 extending across the width of the receptacle. The purpose of this baffle is to ensure an even gravitation of the fertiliser in the receptacle to the surface of the conveyor forming the floor thereof, without any tendency for the material to arch over the conveyor or otherwise to dispose itself in an uneven manner over the surface thereof.

Referring now to the distributor unit, the details of this unit are shown in Figures 3 to 7. As there shown, the unit comprises two main rotary impact members 33, 34 and a third (supplementary) rotary impact member 35, the three impact members being accommodated between a pair of end plates 36, 37 rigidly held in spaced position relatively to one another by a series of connecting bolts 38 bridging the space between the plates and forming with the plates a framework for the unit. This framework is rigidly affixed to the chassis of the machine through the intermediary of brackets 38a (Figure 1) and other connecting members (not shown).

The three impact members 33, 34, 35 are rapidly revoluble about their respective axes, which are disposed parallel to the path of travel of the machine. The two impact members 33, 34 each comprise a hub 39, two ends discs 40, 41 disposed at opposite ends of the hub 39 and rigidly affixed thereto and four flat blades 42 rigidly affixed at the ends, through the intermediary of flanges 43 thereon, to the end discs 40, 41, the blades 42 being disposed at equal angular distances apart around the axis of the impact member but in planes which are at a slight angle to a diametral plane through the member, in the manner clearly shown in Figure 3 of the drawings. Thus, the disposition of the blades in the impact member in each case is such that when two diametrically opposite blades of the member are in vertical planes with the other two blades in horizontal planes, a radius line extending from the axis of the impact member to the outer edge of the uppermost blade therein is slightly inclined to the vertical in the direction away from the vertical centre line of the machine.

Above each impact member 33 (34) is a feed hopper 44 of a downwardly tapering shape in vertical cross-section transversely of the machine. The two hoppers which are formed by the portions of the end plates 36, 37 respectively abreast of then in conjunction with downwardly converging wall members 45, 46 spaced apart at the lower end by a gap 47 through which the fertiliser flows as a stream falling into the path of the rapidly moving blades 42 of the impact member below, are situated vertically between the rear terminal roller 7 of the belt conveyor forming the floor of the receptacle 3, with the result that they become continuously charged therefrom with fertiliser as the conveyor operates.

The impact members 33, 34 respectively rotate in the directions of the arrows appearing in Figure 3, with the result that the fertiliser falling into the path of the rapidly moving blades 42, becomes projected as a stream solely in a direction transverse to the path of the machine, as is clearly shown in Figure 5, the stream proceeding from the distributor unit and continuing well beyond the lateral confines of the machine, while all along the stream the fertiliser either falls to the ground, gravitating out of the stream, or is projected thereonto, partly and usually mainly, by direct projection from the blades of the impact member and partly by deflection from the underside of an elongated inverted U-shaped shroud 48 extending laterally of the machine along and in close proximity to the path of the stream of powder from the impact member, the said shroud being effective to shield the stream beyond the lateral confines of the machine and ensure that as the machine moves along, the powder is spread in a substantially uniform manner over a maximum area of the ground disposed laterally of the path of the machine.

The two impact members 33, 34 are each provided with a shroud 48 as aforesaid, the arrangement being a symmetrical one on either side of the vertical centre line of the machine, in the sense that with the two impact members oppositely handed to one another and operative, therefore, to project their streams of fertiliser in respectively opposite directions, one to one side of the machine and the other to the other side thereof, the areas of the ground which are respectively spread with fertiliser by the two impact members are of equal width to one another on either side of the machine.

Between these two areas is a third area immediately below the machine, which is not spread, or is only insufficiently spread, with fertiliser by the two impact members 33, 34 and it is this third area which is taken care of by the third (supplementary) impact member 35, which operates, therefore, simultaneously with the two main impact members 33, 34 to spread the fertiliser over the third area, thereby completing the full area of spread of the machine or rendering said area uniform from side to side thereof.

The third impact member 35 operates upon a proportion of fertiliser which finds its way into the relatively confined space 49 (see Figure 5) intervening in the distributor unit between the two main impact members 33, 34, the arrangement as regards these latter impact members and the feed of fertiliser thereto from the hoppers 44, being such that in the operation of the machine a proportion of the fertiliser finds its way into the space 49 and, therefore, into the path of the third impact member 35 so as to be operated upon by said third impact member, with the effect above set forth. A part of said proportion of the fertiliser may reach the space 49 by escaping the path of the blades of the impact member 33 or 34, as shown by the arrow 50 in Figure 5, and another part by being carried round by the blades of the impact member, either by direct contact therewith or by entrainment in a current of air generated around the periphery of the impact member by the rapid rotation thereof, as shown by the arrow 51 in Figure 5.

The third impact member 35 comprises, in the embodiment of the invention shown, a hub 52 and two oppositely directed blades 53, 54 disposed in a plane truly radial with respect to the axis of the member.

The three impact members 33, 34, 35 are arranged to be driven by the propelling motor of the chassis of the machine through the intermediary of the transmission shafts 11, 13 aforesaid, the universal coupling 12 connecting these shafts and a system of gearing incorporated in the ditributor unit.

The system of gearing referred to comprises a shaft 55 extending in the distributor unit in a direction parallel to the direction of length of the machine. This shaft 55 is coupled to the transmission shaft 13 through the intermediary of a coupling 56 (Figure 1) disposed at the forward end of the shaft 55. At the rear end of the shaft 55 is a sprocket wheel 57 rigidly affixed to the shaft. Engaging the sprocket wheel 57 is an endless chain 58 which also engages a sprocket wheel 59 coaxial and fast with the hub of the impact member 33, a similar sprocket wheel 60 coaxial and fast with the hub of the impact member 35 and another similar sprocket wheel 61 revolubly mounted in a bracket 62 affixed to the rearwardly presented face of the end plate 37 of the unit. The sprocket wheel 61 is coaxial and fast with a toothed wheel 63 meshing with another toothed wheel 64 coaxial and fast with the hub of the impact member 34, the two toothed wheels 63, 64 being of the same diameter. The three sprocket wheels 59, 60 and 61 are all of the same diameter and consequently the three impact members all rotate at the same speed about their respective axes. If necessary, however, the third (supplementary) impact member 35 may be arranged to run at a different speed from the main impact members 33, 34, according, for example, to the practical requirements of the machine, which in turn may depend upon the spreading characteristics of the fertiliser to be spread in the use of the machine. The chain 35 runs over a jockey sprocket 65 adjustable in a bearing 66 also affixed to the rearwardly presented face of the end plate 37, to adjust the tension of the chain, and of course the three impact members are furnished with bearings 67 at each end in the two end pates 36, 37 of the unit.

The shrouds 48 are pivotally connected at 68 to trunnion brackets 69 projecting laterally from the upper corners of the end plates 36, 37 of the distributor unit, as shown clearly in Figure 3, to swing upwardly to an inoperative vertically disposed position in which one is shown in Figure 2, being swingable to this position to enable the machine to pass through farm gates and into farm buildings and the like which would be too narrow to permit passage of the machine with the shrouds in the lowered (operative) position in which they both appear in Figure 5.

At the end of each shroud 48 may be a baffle 70 operative to limit the maximum distance of projection of the fertiliser along the shroud, thereby enhancing the substantial uniformity of the lateral boundary of the deposit of fertiliser on the ground along the side thereof remote from the distributor mechanism of the machine. In this way it is possible for the operator working the machine to avoid wastage of fertiliser and also bands of excessive concentration thereof on the ground, due to overlap of adjacent areas of deposit of the material along the lateral boundaries thereof; with the lateral boundaries of each deposit rendered substantially uniform thus, by the action of the baffles, the operator can readily steer his machine so as to bring the lateral boundary of the deposit in course of being made just up to the adjacent lateral boundary of the previously made deposit, in the sense of avoiding any material overlap of the deposits along this boundary.

If desired, the baffles 70 may be angularly adjustable about a horizontal axis, for example at 71, for the purpose of varying their effect as required.

The two impact members 33, 34 generate a current of air by their rotation, which becomes projected along with the stream of fertiliser along the correspond-shroud 48 and according to the modification illustrated in Figure 7, a part of the air to form this current is drawn into the impact member axially thereof by way of inlet openings 72 in the end plate 36 of the distributor unit and co-registering inlet openings 73 in the end disc 40 of the impact member. In this way, the impact member is enabled to act as a centrifugal fan, drawing in air along an axial path and delivering it along a tangential path, the current of air thus projected along the shroud carrying with it at least the finer particles of the stream of fertiliser.

As will be observed, the particular embodiment of the invention described above with reference to the drawings embodies the inventions forming the subject matter of United Kingdom Patents No. 560,283 and No. 560,687.

Various modifications are possible. For example, the shrouds may be of a telescopic construction, instead of being pivotally mounted as in the foregoing particular embodiment of the invention. Also, they may be adjustable as regards their operative position, for example angularly about the axis of pivotal connection of the shroud to the body of the machine, for the purpose of controlling the path of the fertiliser as required, for instance to suit the particular characteristics of the material. Again, the rotary impact member or members and (if provided) the mechanical floor, may be driven by an independent power unit, for example a small petrol engine, instead of by the propelling motor of the machine, or in the case of a manually or animal drawn machine, by the wheels of the machine.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A machine for spreading dry powdered fertilisers over the face of the ground, comprising in combination a rotary impact member whose rotational axis is horizontal and parallel to the path of travel of the vehicle and whose action is to project dry powdered material falling into the path of its impact surfaces from a position above said path a considerable distance laterally of the machine, well beyond the lateral confines thereof, the impact member being operable to project the material solely along a path transverse to said path of travel; means for feeding powdered fertiliser carried in a supply receptacle therefor forming part of the machine, to said path of said impact surfaces; and an inverted-U section shroud disposed along the path of projection of the fertiliser so as to shroud the same laterally thereof and above it, beyond said confines of the machine.

2. A machine as claimed in Claim 1, wherein there are two rotary impact members, one operable to project the powder to one side of the machine and the other to the other side thereof, and two shrouds disposed respectively along the two paths of projection of the fertiliser.

3. A machine as claimed in Claim 2, wherein the rotary impact members are disposed abreast of one another, with the interposition of a relatively confined space between them and are so designed and arranged that in the operation of the machine a proportion of the powder to be distributed finds its way into the path of a third rotary impact member arranged in said space and operable upon the said powder to distribute the same over the part of the ground disposed within the lateral confines of the machine which in the travel of the machine, is not spread, or spread sufficiently, with powder by the first-mentioned impact members.

4. A machine as claimed in any of the preceding claims, wherein the rotary impact member, or each rotary impact member, operative to project the powder as a stream beyond the lateral confines of the machine, generates a current of air laterally directed relatively to the path of the machine, which is projected along the path of the stream of powder and carries along with it at least the finer particles of the said powder.

5. A machine as claimed in Claim 4, wherein a part at least of the air forming the air current is drawn into the rotary impact member axially thereof by centrifugal action.

6. A machine as claimed in any of the preceding claims, wherein baffle means are provided at the end of the shroud, or each shroud, remote from the rotary impact member, for limiting the maximum distance of projection of the powder and thereby enhancing the substantial uniformity of the lateral boundary of the deposit of powder on the ground along the side thereof remote from the impact member.

7. A machine as claimed in any of the preceding claims, wherein the rotary impact member or members is or are fed with the powder to be distributed from

[This Drawing is a reproduction of the Original on a reduced scale.]

FIG. 1.

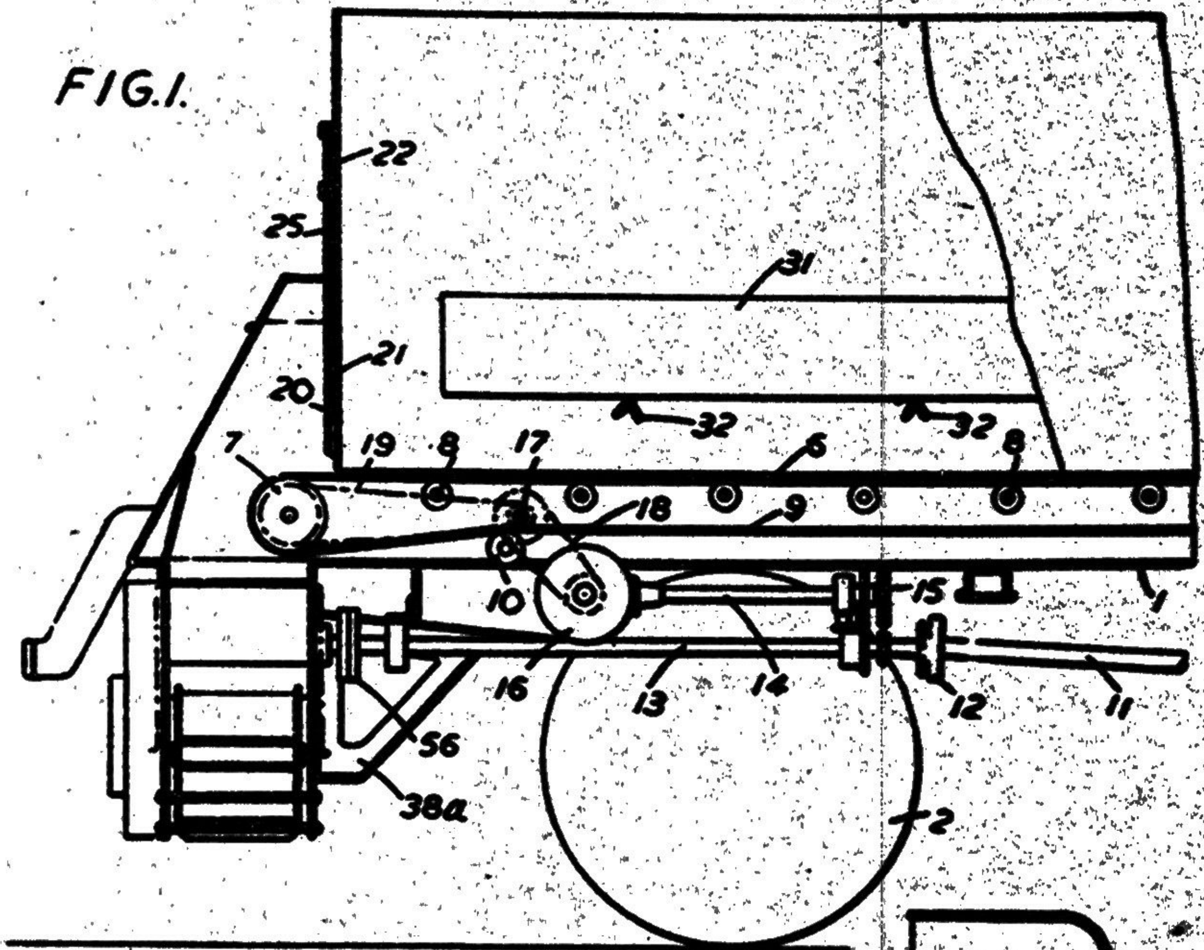
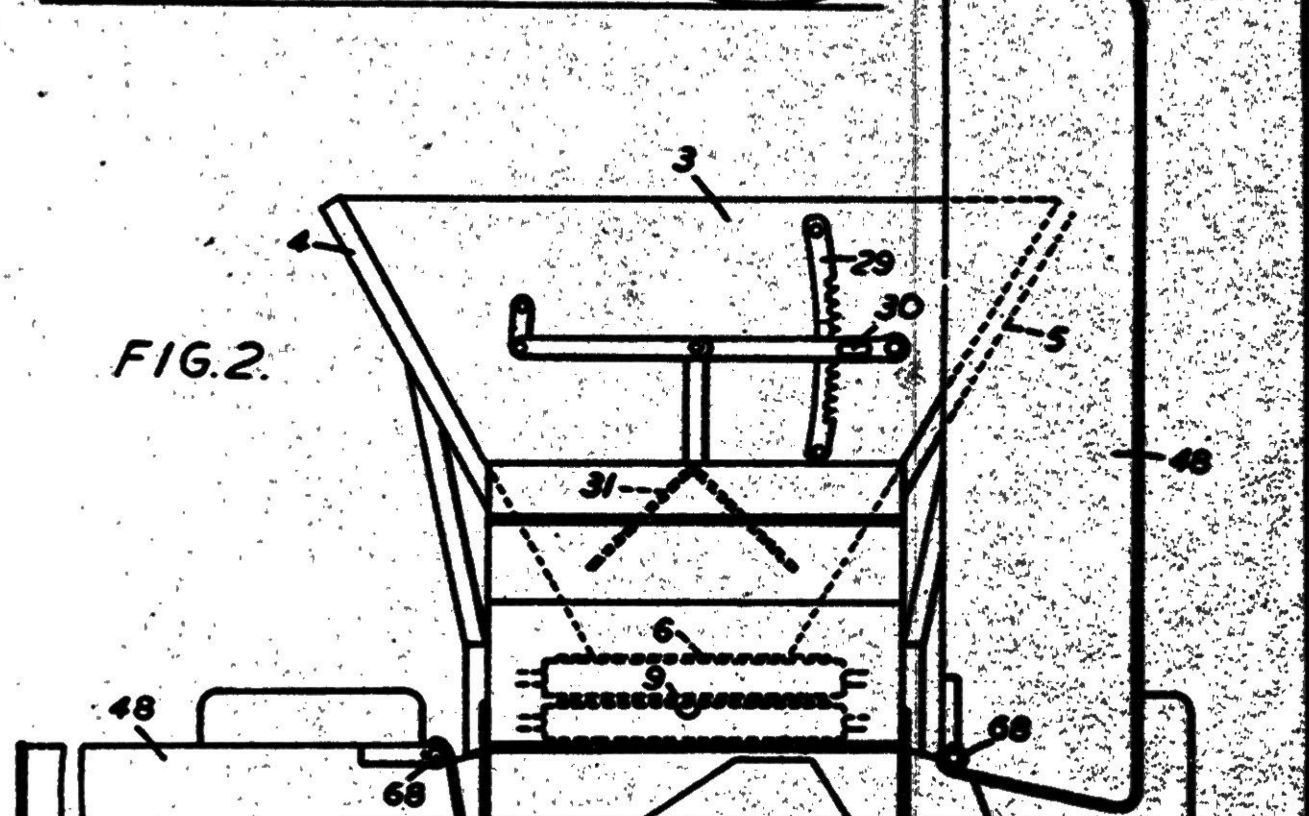


FIG. 2.



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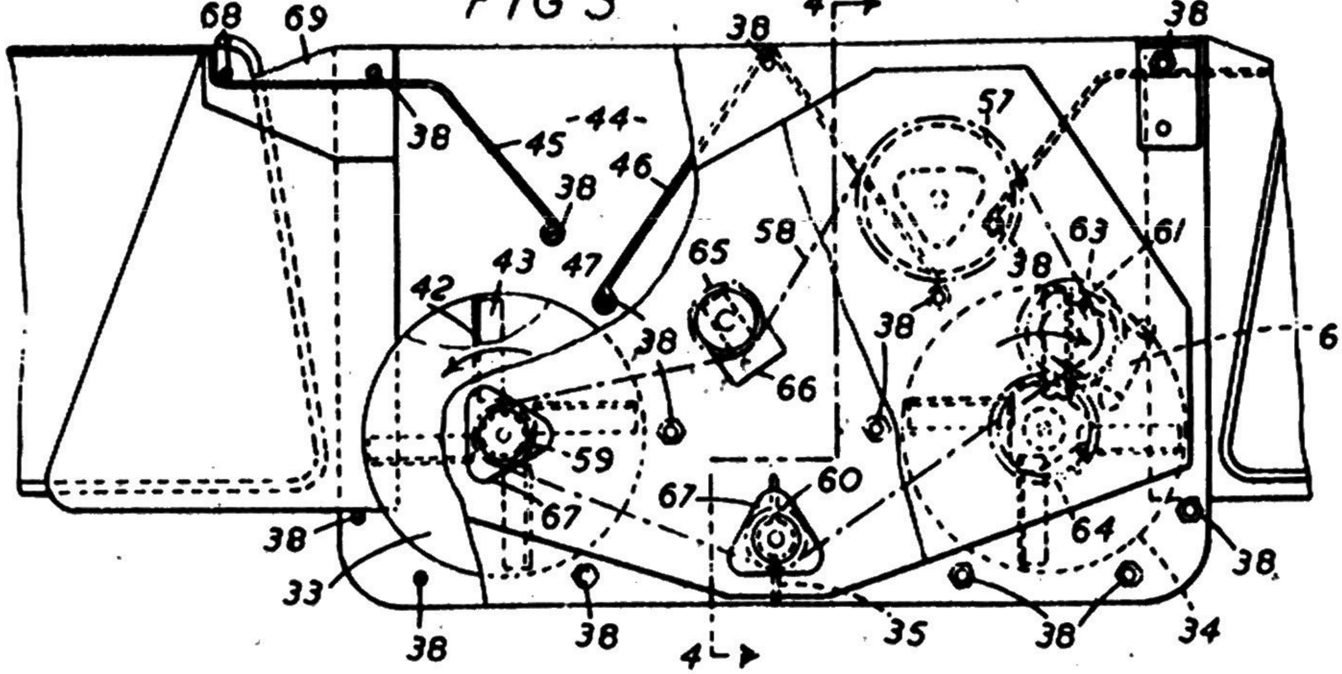


FIG 3

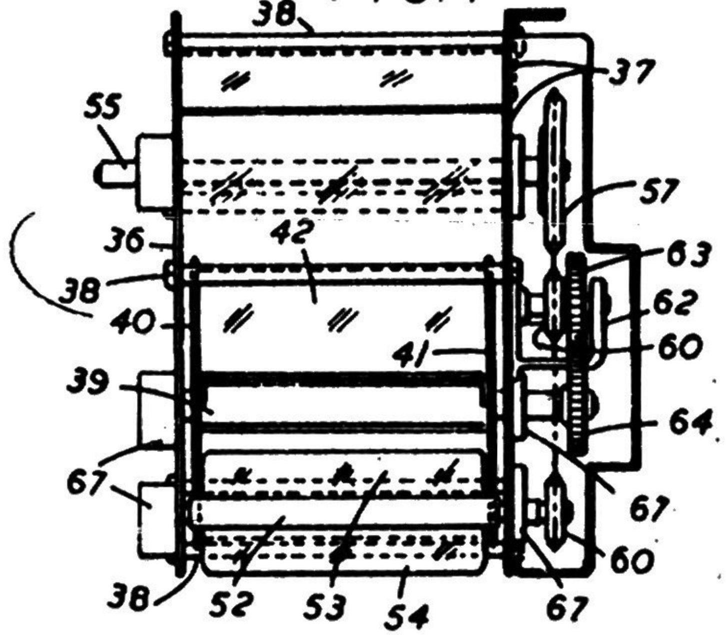


FIG. 4

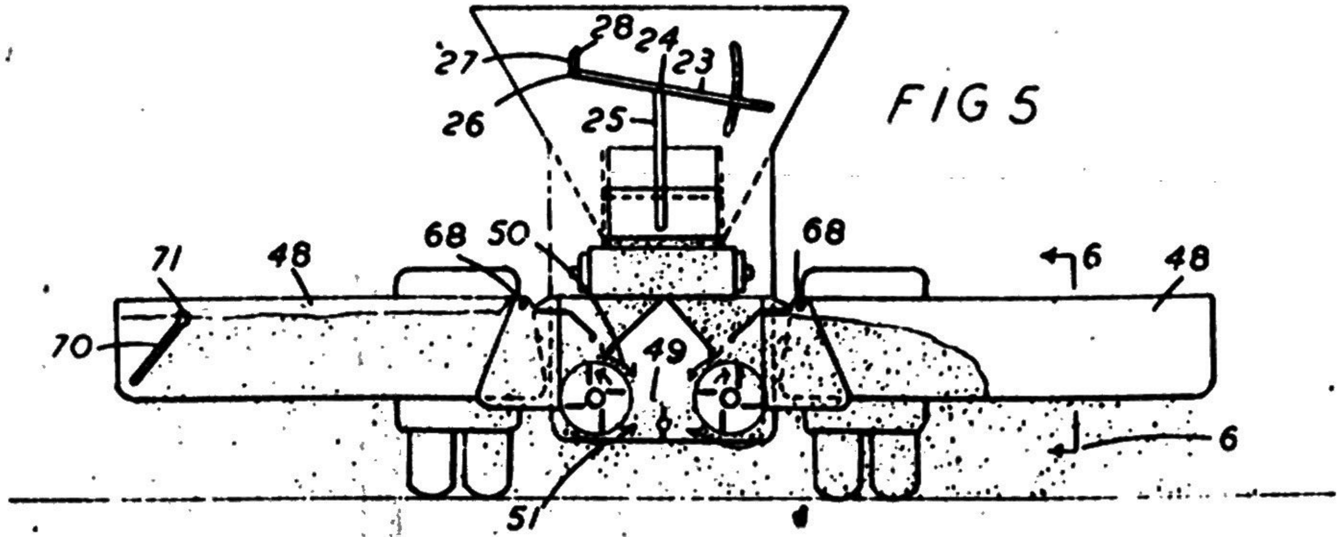


FIG 5

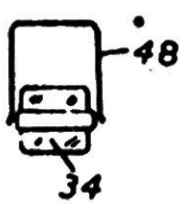


FIG. 6.

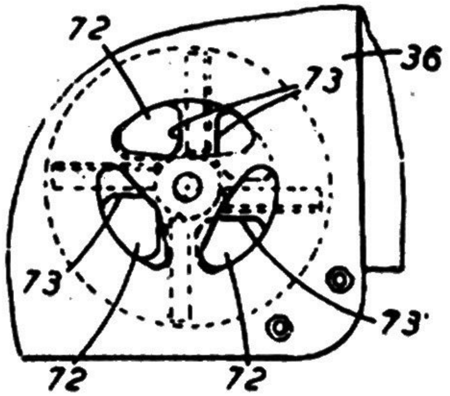


FIG 7

April 28, 1942. C. U. STOLTZFUS 2,281,212

MATERIAL SPREADER

Filed July 27, 1940 3 Sheets-Sheet 1

Fig. 1.

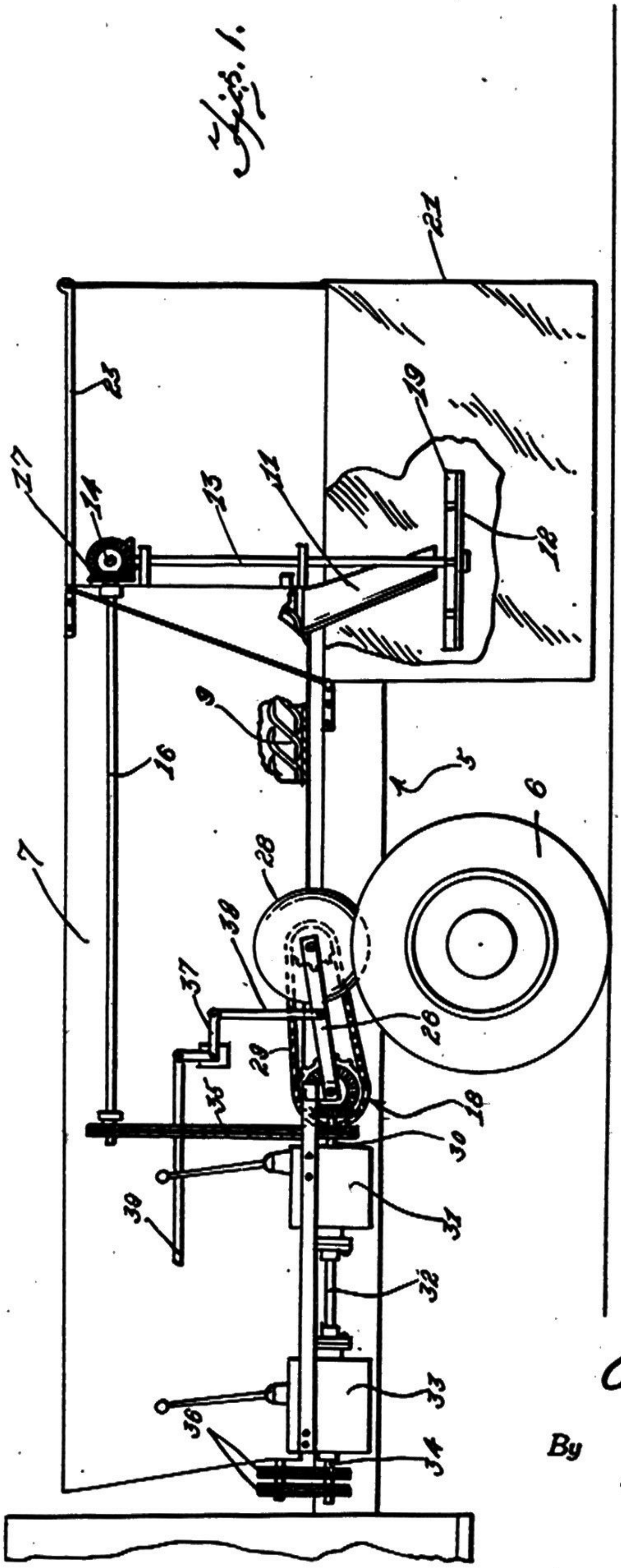
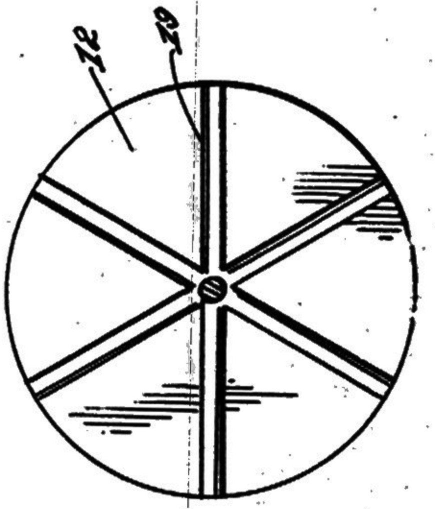


Fig. 4.



Inventor

Christian U. Stoltzfus

By Clarence A. O'Brien

Attorney

April 28, 1942. C. U. STOLTZFUS **2,281,212**

MATERIAL SPREADER

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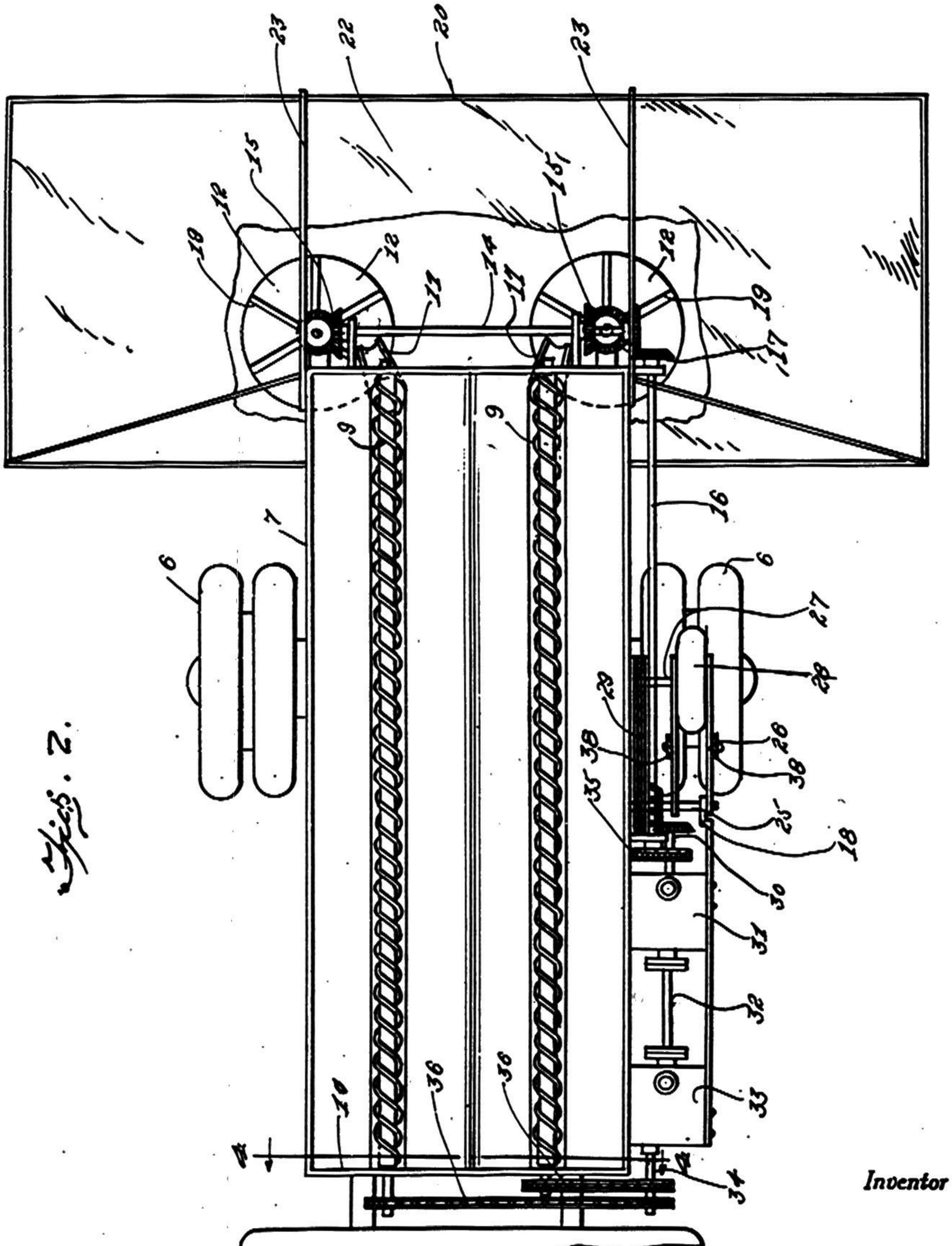

Fig. 2.

Inventor

Christian U. Stoltzfus

By Clarence A. O'Brien

Attorney

April 28, 1942. **C. U. STOLTZFUS** 2,281,212

MATERIAL SPREADER

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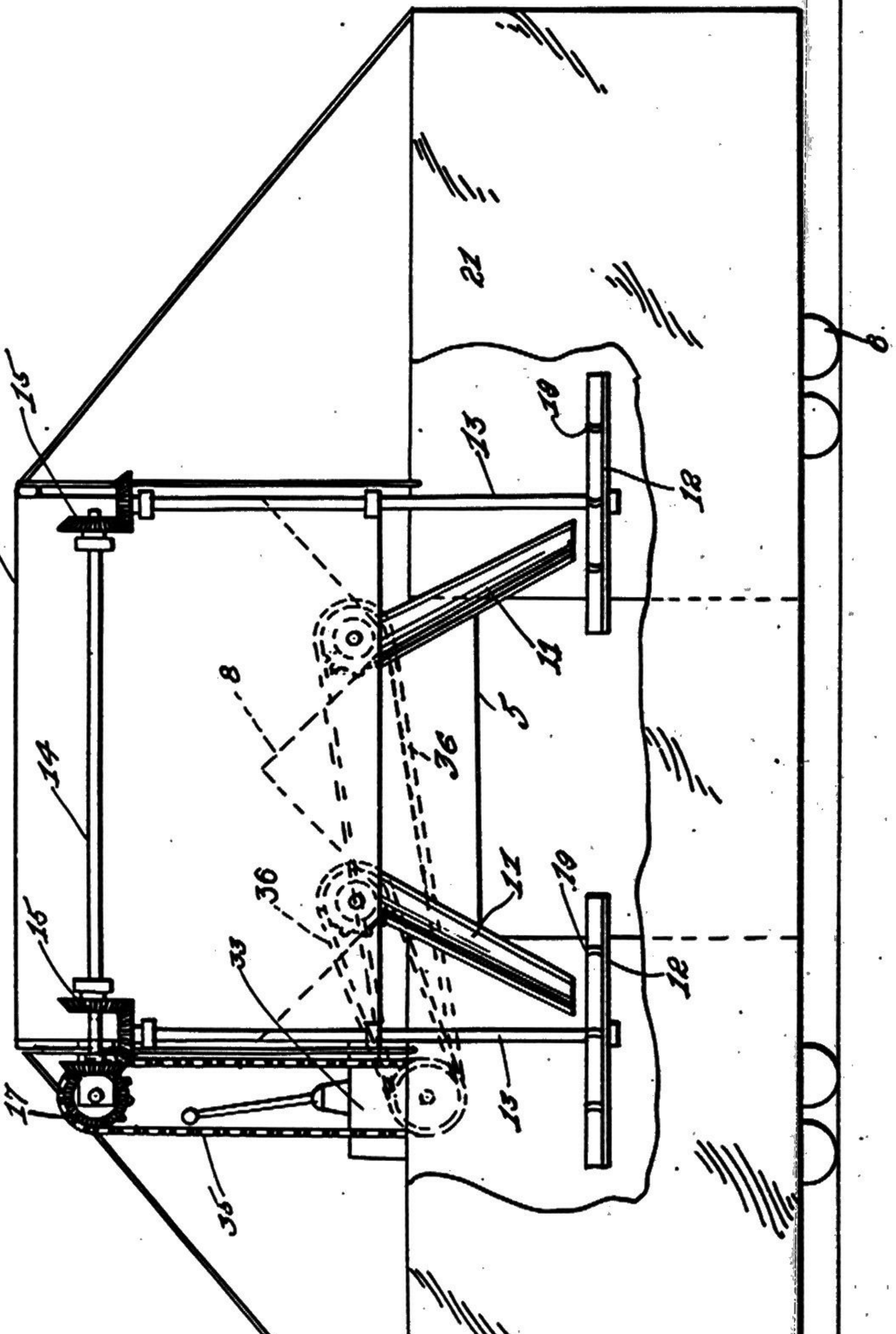

Fig. 3.

Inventor

Christian U. Stoltzfus

By Clarence A. O'Brien

Attorney

UNITED STATES PATENT OFFICE

2,281,212

MATERIAL SPREADER

Christian U. Stoltzfus, Joanna, Pa.

Application July 27, 1940, Serial No. 348,042

1 Claim. (Cl. 275—8)

This invention relates to a material spreader especially adapted for agricultural purposes and has for the primary object the provision of a device of this character which may be readily mounted on a conventional type of motor vehicle to be carried thereby and to receive power therefrom for its operation of spreading uniformly over the ground materials, such as fertilizer in the form of lime, compost, etc. and is so constructed that its speed of deliverance of the material may be varied and also whereby wind or air currents will not unduly affect the uniform distribution of the material.

With these and other objects in view, the invention consists in certain novel features of construction, combination and arrangement of parts to be hereinafter more fully described and claimed.

For a complete understanding of my invention, reference is to be had to the following description and accompanying drawings, in which—

Figure 1 is a side elevation, partly in section, illustrating a material spreader constructed in accordance with my invention and showing the same mounted on a conventional type of motor vehicle.

Figure 2 is a top plan view, partly broken away, illustrating the device.

Figure 3 is a rear elevation illustrating the device.

Figure 4 is a plan view, partly in section, illustrating one of the rotatable distributing discs.

Referring in detail to the drawings, the numeral 5 indicates a fragmentary portion of a conventional type of motor vehicle, the rear traction wheels being indicated by the character 6. This much of a motor vehicle is disclosed in the drawings for the purpose of clearly illustrating the application of the present invention on a vehicle of this type.

An open type body 7 is mounted on the frame of the motor vehicle and forms a hopper to receive material to be distributed and the bottom wall thereof is in the form of a pair of troughs 8 each of substantially V-shape in cross section and operating in said troughs are spiral type conveyors 9 suitably journaled in end walls 10 of the body and which deliver into downwardly extending troughs 11 mounted on the rear end of the body and terminate directly over rotatable distributing discs 12.

The discs 12 are secured to the lower ends of vertically arranged shafts 13 suitably journaled at the rear end of the body and said shafts are geared to a transversely arranged shaft 14, as shown at 15. A longitudinally extending shaft 16 is journaled on the body and is geared to the transversely arranged shaft 14, as shown at 17. The shaft 16 is driven by a power takeoff mechanism indicated in entirety by the character 18 and which will be hereinafter more fully described in detail.

The discs 12 have secured on the upper faces thereof radially extending fins or plates 19 to aid in the discharge of the material received from the troughs 11 over a given area of ground as the vehicle progresses thereover.

A frame 20 is mounted on the rear portion of the body and has secured thereto and depending therefrom curtains 21 in which the rotating discs operate. The purpose of the curtains is to protect the distribution of the material from the discs from air currents or wind so that the uniform distribution of the material will not be affected on a windy day. The frame 20 also carries a top wall 22 of fibrous material through which the shafts 13 and troughs 11 extend coacting with the curtains 21 in completing the enclosure in which the discs operate.

A superstructure 23 is secured on the body 7 and attached to the frame 20 to aid in supporting the latter at the rear end of the motor vehicle.

The power takeoff mechanism 18 includes a shaft 25 suitably journaled on the body 7 at one side thereof and has journaled thereon spaced arms 26 carrying an axle 27 to which is secured a wheel 28 adapted to be moved into engagement with a pair of traction wheels of the motor vehicle. If desired, the wheel 28 may be tired with a pneumatic tire.

The axle 27 is connected to the shaft 25 by sprocket gear mechanism 29.

The shaft 25 is geared to a shaft 30 forming a part of a variable speed transmission 31 of a conventional construction. The transmission 31 may be connected through a drive shaft 32 to a variable speed transmission 33 of a conventional construction. The power takeoff shaft of the transmission 33 is indicated by the character 34.

A sprocket chain mechanism 35 connects the shaft 30 to the shaft 16 and the power takeoff shaft 34 is connected to the conveyors 9 by sprocket chain mechanisms 36.

A bell crank lever 37 is pivotally mounted on one side of the body and is connected to one of the arms 26 by a link 38 and a suitable control device 39 is connected to the bell crank lever whereby the operator may engage and disengage the wheel 22 with the traction wheels of the vehicle.

Thus it will be seen from the foregoing description taken in connection with the drawings that the material placed in the body may be readily fed therefrom onto the rotating discs and the latter through centrifugal action will spread the material uniformly over a selected area of ground during the forward progress of the vehicle. Further, it will be seen that the conveyors and discs are driven by power derived from the traction wheels of the motor vehicle and that these parts can be driven at variable speeds through the manipulation of the transmissions 31 and 33.

While I have shown and described the preferred embodiment of my invention, it is to be understood that minor changes in construction, combination and arrangement of parts may be made without departing from the spirit and scope of the invention claimed.

Having thus described the invention, what I claim is:

In a material spreader, a vehicle having a body, means for conveying material to the rear of the body, horizontally arranged centrifugal spreading means at the rear of the body and located below the body, chutes for delivering the material from the conveying means on to said spreading means, an elongated horizontally arranged frame connected with the vehicle below the body and extending outwardly beyond the sides of the body and rearwardly beyond the rear end of the body, curtains suspended from the frame and terminating a limited distance from the ground to restrict spreading of the material beyond a given distance from the body, a flexible top connected with the frame and having openings therein for the passage of the chutes, said frame having vertically arranged portions engaged by parts of the curtains, a frame connected with the top of the rear portion of the body and extending beyond the same and suspension means connecting the last-mentioned frame with the curtain supporting frame.

CHRISTIAN U. STOLTZFUS.

March 14, 1950 G. O. HOFFSTETTER 2,500,681

LATERAL SPREADER

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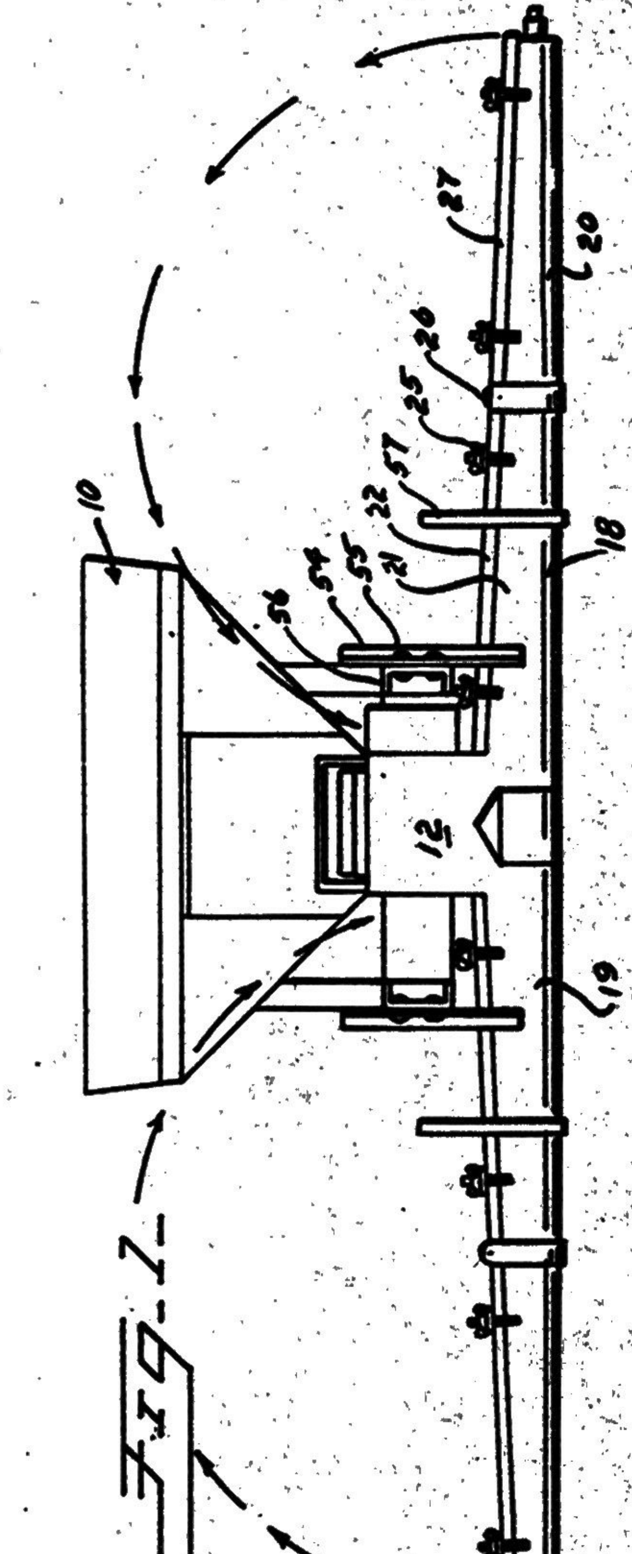

FIG. 1

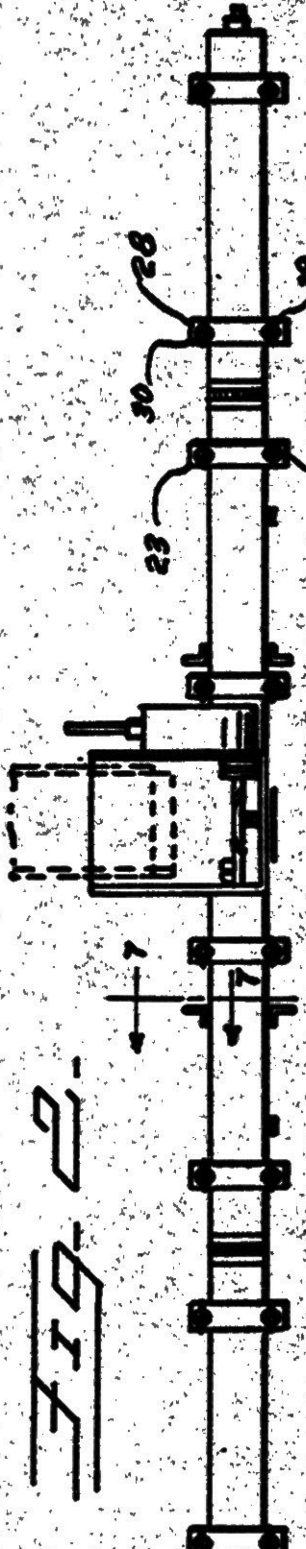

FIG. 2

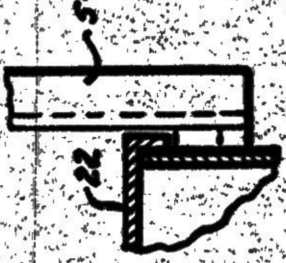

FIG. 7

Inventor

G. O. Hoffstetter

By Kimmel & Crowell

Attorneys

March 14, 1950 G. O. HOFFSTETTER 2,500,681

LATERAL SPREADER

Filed July 29, 1946 2 Sheets-Sheet 2

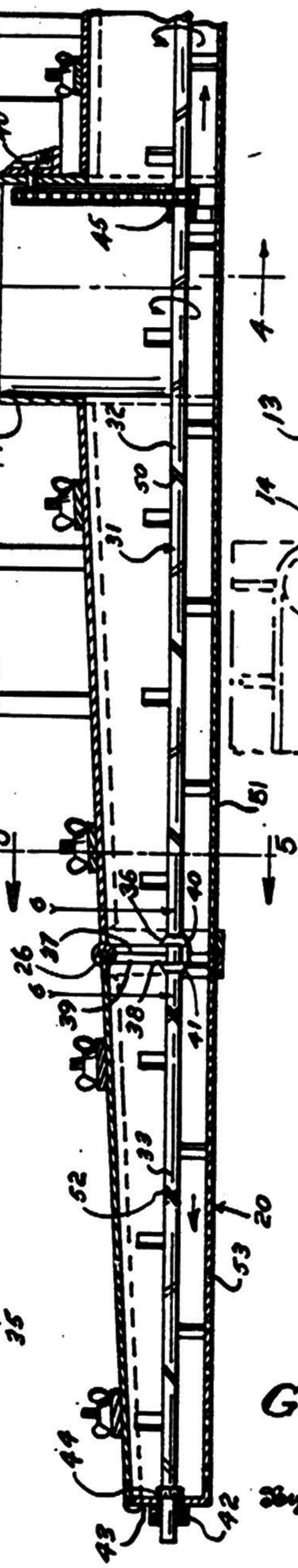

Fig. 3.

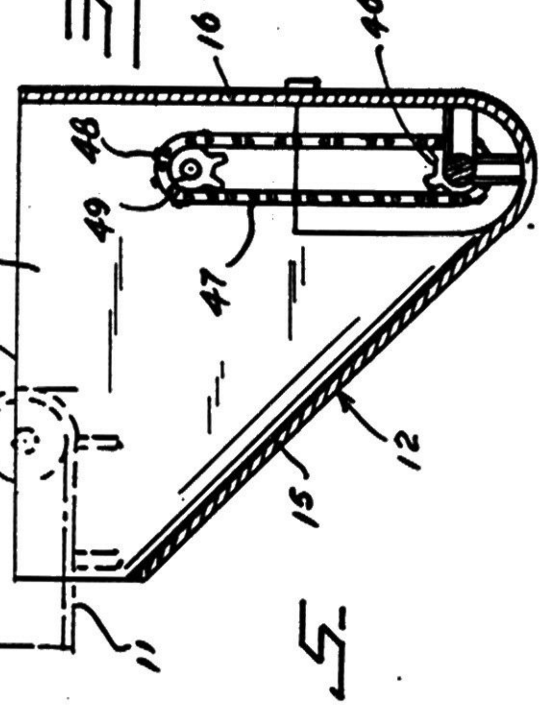

Fig. 4.

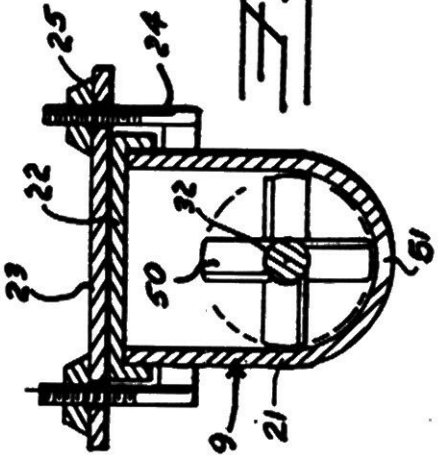

Fig. 5.

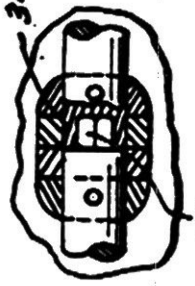

Fig. 6.

Inventor

G.O. Hoffstetter

By Kimmel & Crowell

Attorneys

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UNITED STATES PATENT OFFICE

2,500,681

LATERAL SPREADER

George O. Hoffstetter, Jerseyville, Ill.

Application July 29, 1946, Serial No. 686,923

2 Claims. (Cl. 275—2)

This invention relates to fertilizer spreaders for mounting on the rear of a hopper.

An object of this invention is to provide a fertilizer spreader which is adapted to spread the material in a fixed path.

Another object of this invention is to provide a spreader in the form of an elongated housing mounted transversely at the rear of a hopper, the housing having discharge openings therein, and also including a conveying means for conveying and agitating the material.

A further object of this invention is to provide a spreader of this kind which is formed with foldable outer ends so that the elongated housing may be collapsed in order that the truck on which the hopper is mounted may be moved over normal roads.

A further object of this invention is to provide in combination with a hopper and a conveyor in the bottom of the hopper for discharging the material from the hopper, a lateral conveyor and spreader receiving the material from the first conveyor and discharging the material onto the ground.

With the above and other objects in view, my invention consists in the arrangement, combination and details of construction disclosed in the drawings and specification, and then more particularly pointed out in the appended claims.

In the drawings,

Figure 1 is a detail rear elevation of a hopper having a fertilizer spreader constructed according to an embodiment of this invention mounted thereon,

Figure 2 is a plan view of the spreader,

Figure 3 is a fragmentary longitudinal section of a spreader,

Figure 4 is a sectional view taken on the line 4—4 of Figure 3,

Figure 5 is a sectional view taken on the line 5—5 of Figure 3,

Figure 6 is a fragmentary sectional view taken on the line 6—6 of Figure 3,

Figure 7 is a fragmentary sectional view taken on the line 7—7 of Figure 2.

Referring to the drawings, the numeral 10 designates generally a hopper which has mounted in the lower portion thereof an endless conveyor 11. The conveyor 11 discharges the material from the inclined bottom of the hopper 10 to the rear of the hopper, and the discharged material from the conveyor 11 enters a receiver generally designated as 12. The receiver 12 is open at the top 13 thereof, and is formed of opposite side walls

14, a downwardly and rearwardly inclining bottom wall 15, and a vertical rear wall 16.

The hopper 10 has associated with the conveyor 11 thereof a gear box 17 which is adapted, as will be hereinafter described, to provide driving means for the laterally distributing conveyor. The receiver 12 has secured thereto a housing generally designated as 18 which includes an inner housing or section 19 which tapers outwardly from the receiver 12 and the outer housing sections 20 which taper on the same angle as the inner section 19. The inner housing section 19 comprises a substantially U-shaped member 21 which is open at the top and the top of the U-shaped member 21 is closed by a flanged cover 22.

The cover 22 is detachably secured on the top of the body 21 by means of transversely extending clamping plates 23 through which engage upstanding bolts 24, which are fixed at the lower ends to the sides of the U-shaped member 21. Wing nuts 25 are threaded on the bolts 24 and when in applied position will firmly clamp the cover or closure 22 over the open top of the U-shaped member 21.

The outer sections 20 are hingedly secured, as at 26, to the outer ends of the inner sections 19. These outer sections 20 are also U-shaped in transverse section and the tops thereof are closed by elongated flanged covers 27 which are held in applied position by means of clamping plates or bars 28. The bolts 29 are fixed to the sides of the outer sections 20, extending through the clamping plates or bars 28 and wing nuts 30 are threaded onto the bolts 29.

The housing 18 has disposed lengthwise thereof an elongated combined conveyor and agitator shaft generally designated as 31. The shaft 31 includes an inner shaft member 32 which extends throughout the length of the inner section 19. The outer sections 20 have journaled therein outer shaft members 33 which are adapted to be coupled to the inner shaft member 32 by detachable coupling means, including a socket 34 carried by the outer end of the inner shaft section 32, and a splined stud 35 carried by the inner end of the outer shaft section 33.

The outer end of the inner shaft section 32 is journaled through bearing 36 carried by a supporting bar 37, and the inner end of the outer shaft section 33 is journaled in a bearing 38 carried by a supporting bar 39.

A collar 40 is secured to the inner shaft member 32 and bears against the inner side of the bearing 36. A collar 41 is fixed on the inner end of the outer shaft member 33 and bears against the bearing 38. The outer end of the outer shaft member 33 is journaled through a bearing 42 which is carried by the outer end wall 43 of the outer section 20. A collar 44 is fixed on the shaft member 33 for holding this shaft member against outward lengthwise movement.

The inner shaft member 32 is also journaled in an inner bearing 45 disposed at the bottom of the receiver 12, and a sprocket 46 is fixed on the inner shaft member 32 and has a chain or flexible drive member 47 trained thereabout. The gear changer 17 includes a shaft 48 having a sprocket 49 fixed thereon within the receiver, and the chain 47 is trained about the driving sprocket 48.

The inner shaft member 32 has fixed thereon a plurality of staggered conveyor blades 50 which are adapted to move the material lengthwise and outwardly of the inner section 19. The inner section 19 is formed in the bottom thereof with a plurality of discharge openings 51 through which the material is adapted to be discharged. The outer shaft members 33 also have fixed thereon a plurality of staggered combined conveyor and agitator blades 52 which are pitched to move the material outwardly in the outer sections 20.

The bottom of each outer section 20 is also formed with a plurality of discharge openings 53. By providing a conveyor which is formed of spaced and staggered blades, the material is not only conveyed and agitated while it is being conveyed, but in the event an undue quantity of material should be moved outwardly, the conveyor blades will permit accumulation of the material in the outer sections 20.

The housing 18 is adapted to be supported rearwardly of the hopper 10 by means of pairs of upwardly extending angle bars 54 which are fixed to the opposite sides of the inner section 19. The bars 54 are adapted to be secured as by fastening means 55 to the supporting frame 56 beneath the hopper 10. The inner section 19 is also provided with upwardly extending bars 57 for holding the outer sections 20 against lateral movement when these outer sections are swung upwardly, as shown by the arrows in Figure 1, to an inoperative position.

In the use and operation of this invention, the housing 18 is secured by fastening members 55 to the hopper frame or chassis associated with the hopper. The conveyor 11 is operated in the normal manner to move the material from the interior of the hopper rearwardly thereof for discharge into the receiver 12. The combined conveyor and agitator 31 is continuously rotated through the gear means 17. As the material is discharged into the receiver 12, this material will be moved in opposite lateral directions by the conveyor 31. As this material moves about the bottom of the housing 18, the material will be discharged through the openings 51 and 53.

With a spreader or distributor as hereinbefore described, the fertilizer or other material which is being spread on the surface of the ground can be spread in a relatively wide path, and when the spreading operation has been completed, the outer sections 20 may be raised by swinging these sections upwardly, inwardly and downwardly so that the housing 18 will not require a relatively wide roadway for movement of the device over a road. This spreader may be used for fertilizer, sand, salt, cinders, ground rock, or other granular or powdered material.

I do not mean to confine myself to the exact details of construction herein disclosed, but claim all variations falling within the purview of the appended claims.

What I claim is:

1. A lateral distributor for a hopper having a discharge conveyor, comprising a receiver for receiving the material from said conveyor, an elongated housing communicating with said receiver and extending at right angles to said hopper, said housing being open at the top and being formed of an inner section and a pair of outer sections hingedly connected to said inner section, flanged covers for said housing sections, means detachably securing said covers on said sections, a central conveyor shaft journaled in said inner housing section, outer conveyor shafts journaled in said outer housing sections, said housing sections having discharge openings in the bottoms thereof, and upwardly extending supporting bars fixed to said inner housing section for attachment to the hopper or vehicle chassis.

2. A lateral distributor for a hopper having a discharge conveyor, comprising a receiver for receiving the material from said conveyor, an elongated housing communicating with said receiver and extending at right angles to said hopper, said housing being open at the top and being formed of an inner section and a pair of outer sections hingedly connected to said inner section, each of said outer sections being adapted to overlie an adjacent section for superimposed folded positioning thereon, flanged covers for said housing sections, means detachably securing said covers on said sections, a central conveyor shaft journalled in said inner housing section, outer conveyor shafts journalled in said outer housing sections, said housing sections having discharge openings in the bottoms thereof, and upwardly extending supporting members carried by said inner housing section engageable with said outer housing sections for holding said outer sections against lateral movement in the folded position thereof.

GEORGE O. HOFFSTETTER.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
435,757	Lehman	Sept. 2, 1890
534,750	Kimball	Feb. 26, 1895
750,463	Kessler	Jan. 26, 1904
896,178	Tuttle	Aug. 18, 1908
937,172	Pearson	Oct. 19, 1909
1,258,515	Wills	Mar. 5, 1918
1,623,743	McGuiness	Apr. 5, 1927
1,668,516	Litchfield et al.	May 1, 1928
1,991,679	Johnson	Feb. 19, 1935
2,221,266	Roach	Nov. 12, 1940
2,280,234	Harvey	Apr. 21, 1942
2,350,107	Gandrud	May 30, 1944
2,369,756	Rosselot	Feb. 20, 1945

(194)

MEMORANDUM OPINION OF JUDGE McGARRAGHY

(Filed June 30, 1955)

This is an action brought for the purpose of obtaining allowance of Claims 1, 2, 3, 4, 5, 6, 16, 29, 30 and 31 of Patent Application Serial No. 91,114 of Aubrey L. Jones, the plaintiff in this action.

At the trial, counsel for the defendant stated that if Claim 1 is held to be allowable, the plaintiff may have the remaining claims except 29, 30 and 31, which were rejected as prolix.

The case has been briefed on both sides solely with respect to the question of whether or not Claim 1 is allowable.

More particularly, the question presented is whether the device as called for by Claim 1 embodies patentable subject matter over the prior art as exemplifed by the Johnson (Great Britain), Stoltzfus and Hoffstetter patents which were cited by the Examiner and by the Board of Appeals as basis for rejection of the claims in suit.

The defendant's brief relies upon the British (195) patent to Johnson and the United States patent to Stoltzfus as of major importance and agrees that the Court need not give consideration to the Hoffstetter patent since it has been agreed by both sides that the right of the plaintiff to a patent covering Claims 1, 2, 3, 4, 5, 6, and 16 may be resolved by consideration of Claim 1 alone.

Claim No. 1 reads as follows:

> "An attachment for converting a conventional mobile rotary disc-type spreader for free flowing solid materials into a spreader for pulverulent material such as phosphate, wherein the conventional spreader includes a hopper having a discharge port and substantially horizontally disposed rotatable impeller means

> carried by a substantially vertically disposed shaft for rendering airborne particles of material discharged through said discharge port, said attachment comprising a central portion dimensioned to enclose the discharge port and said impeller means, said central portion including front, top and rear walls, and a pair of end portions each including front, top, rear and outer end walls, said end portions hingedly secured to said central portion for movement between lowered and raised positions relative thereto, said end portions when in lowered position combining with said central portion to define an elongated unobstructed open-bottomed chamber within which chamber pulverulent material from said hopper is rendered airborne due to rotation of the said impeller means and will accumulate in sufficient concentration to effect a substantially uniform gravitational (196) depositation through said open bottom without any appreciable blow away of the material and thus effect a uniform application of the material on the ground, means for securing said central portion to the hopper of a pulverulent distributor, and means for rotating the impeller shaft."

Upon consideration of the entire record before the Patent Office, as well as the testimony taken in open court, the depositions filed herein, and the demonstrations made at the trial, I agree with the Board of Appeals that the claims in question are unpatentable over the prior art.

More specifically, I am of the opinion:—

1. That the patents to Johnson and Stoltzfus each clearly discloses a structure having similar elements to those in Claim No. 1 which comprise an attachment to the vehicle body to which the spreader is attached, and that the

spreaders shown in Johnson and Stoltzfus are clearly attached to a commercially available truck bed with which they are used to spread material carried by the truck body.

2. That both Johnson and Stoltzfus clearly state that the spreaders or distributor devices may be readily mounted on a conventional type of motor vehicle to be carried thereby and no invention is involved in using any particular means to connect the spreader or distributor of these devices to the truck bodies with which they are used.

3. That the spreaders or distributors of Johnson and Stoltzfus all comprise devices which are attached to a conventional vehicle body, and thus comprise (197) an attachment within the meaning of the term as used in Claim No. 1.

4. That it is obvious and devoid of invention to substitute the horizontally rotating impellers as shown by Stoltzfus for the vertically rotating impellers as shown by Johnson and that Claim No. 1 does not define invention over the combination.

5 That the structure shown by Johnson can be used for distributing a fine pulverulent material such as is adapted to be spread by plaintiff's spreader. The Johnson patent specifically mentions superphosphates as one of the materials his device is intended to spread.

6. That the details of the size, shape and proportions of the housing parts are matters which in no way define invention as set forth in the application since they are merely differences in design within the skill of the ordinary skilled worker in this art.

7. That while both Johnson and Stoltzfus disclose a pair of impellers instead of a single impeller used by the plaintiff, whether one or two impellers are used is a mere matter of choice or design not involving invention.

In view of the foregoing, the complaint will be dismissed. Counsel for the defendant will prepare appropriate findings of fact, conclusions of law and judgment consistent with the foregoing.

/s/ Joseph C. McGarraghy
JUDGE

June 30, 1955

(198)

FINDINGS OF FACT

(Filed August 25, 1955)

1. This is a civil action brought under the provisions of 35 U.S.C. (1952) 145, in which plaintiff, as the applicant in an application for patent entitled "Apparatus for Distributing Pulverulent Material," Serial No. 95,114, filed May 24, 1949, sought to have the Court authorize the issuance to him of a patent containing claims 1, 2, 3, 4 , 5 , 6, 16, 29, 30, and 31 of that application. All those claims were rejected by the examiner and the Board of Appeals, and no claim was allowed by these tribunals of the Patent Office.

2. At the trial, counsel for defendant stated that if claim 1 were held allowable, plaintiff might be allowed the remaining claims except claims 29, 30, and 31, which were rejected below as prolix, in addition to their rejection as unpatentable over the cited prior art. The case was briefed on both sides solely with respect to the question of whether or not claim 1 is allowable.

3. Consistently with the disclosure of plaintiff's application in suit, plaintiff's claim 1 defines an attachment for converting a conventional mobile rotary disc-type spreader for free flowing solid materials into a spreader for pulverulent material, such as phosphate. The conventional spreader includes (199) a hopper having a discharge port and sub-

stantially horizontally disposed rotatable impeller means carried by a substantially vertically disposed shaft for rendering airborne particles of material discharged through said discharge port. The attachment comprises a central portion dimensioned to enclose the discharge port and said impeller means. The central portion of the attachment includes front, top and rear walls. The attachment also comprises a pair of end portions each including front, top, rear and outer end walls. These end portions are hingedly secured to said central portion for movement between lowered and raised positions relative thereto. When in lowered position, the end portions combine with the central portion to define an elongated unobstructed open-bottomed chamber within which chamber pulverulent material from said hopper is rendered airborne due to rotation of said impeller means and will accumulate in sufficient concentration to effect a substantially uniform gravitational depositation through said open bottom without any appreciable blow away of the material and thus effect a uniform application of the material on the ground. Means are provided for securing said central portion to the hopper of a pulverulent distributor. Means further are provided for rotating the impeller shaft.

4. Claims 1, 2, 3, 4, 5, 6, 16, 29, 30, and 31 in suit severally were rejected below as unpatentable in view of the following prior patents, offered in evidence by defendant at the trial.

Stoltzfus	2,281,212	Apr. 28, 1942
Johnson (British)	584,809	Jan. 23, 1947
Hoffstetter	2,500,681	Mar. 14, 1950

(200) In his brief, defendant agreed that the Court need not give consideration to the Hoffstetter patent. This patent had not been relied upon below in the rejection of claim 1,

and it had been agreed by both sides that the right of plaintiff to a patent containing claims 1, 2, 3, 4, 5, 6, and 16 in suit might be resolved by consideration of claim 1 alone.

5. The British patent to Johnson discloses a spreader for dry powdered fertilizers. The spreader includes a distributor unit comprising two main rotary impact members and a third supplementary rotary impact member. These three impact members are accomodated between a pair of spaced end plates, which with bridging and connecting bolts form a framework for the unit, and with a sloping roof, enclose the impact members. The impact members rapidly revolve about axes disposed parallel to the path of travel of the machine, with the axes thus substantially horizontal and the impact members vertically rotating. Each of the main rotary impact members is provided with an elongated inverted U-shaped shroud extending laterally of the machine. Each shroud is effective to shield the stream of powdered fertilizer, coming from the impact member, beyond the lateral confines of the machine, and to ensure spreading of the fertilizer in a substantially uniform manner over a maximum area of the ground laterally of the path of the machine. All along the stream the fertilizer either falls to the ground, gravitating out of the stream, or is projected thereonto. Each shroud is pivotally connected to the end plates of the distributor unit. The two main rotary impact members generate a current of air by their rotation, which becomes projected along with the stream of fertilizer along the corresponding shroud.

(201) 6. The material spreader especially adapted for agricultural purposes shown in the patent to Stoltzfus includes a canopy substantially surrounding rotatable distributing discs, horizontally rotating impellers, so that wind or air currents will not unduly affect the uniform distribution of such fine material as lime. The canopy comprises

curtains depending from a frame which also carries a top wall of fibrous material, the top wall completing the enclosure in which the rotary discs operate. The curtains restrict spreading of material beyond a given distance from the vehicle body. The rotary discs, mounted on vertically arranged shafts, through centrifugal action spread the material uniformly over the ground during forward progress of the vehicle.

7. The patents to Johnson and Stoltzfus each clearly discloses a structure having similar elements to those in claim 1 in suit which comprise an attachment to the vehicle body to which the spreader is attached.

8. The spreaders shown in Johnson and Stoltzfus are clearly attached to a commercially available truck bed with which they are used to spread material carried by the truck body.

9. The spreaders or distributors of Johnson and Stoltzfus all comprise devices which are attached to a conventional vehicle body, and thus comprise an attachment within the meaning of that term as used in claim 1 in suit.

10. The structure shown by Johnson can be used for distributing a fine pulverulent material such as is adapted to be spread by plaintiff's spreader. The Johnson patent specifically mentions superphosphates among the materials his device is intended to spread.

(202) 11. No invention is involved in using any particular means to connect the spreader or distributor of the Johnson and Stoltzfus devices to the truck bodies with which they are used.

12. It is obvious and devoid of invention to substitute the horizontally rotating impellers as shown by Stoltzfus for the vertically rotating impellers as shown by Johnson.

13. The details of the size, shape and proportions of the housing or attachment parts, as set forth in plaintiff's application and claims in suit, are matters which in no way

define invention since they are merely differences in design within the skill of the ordinary skilled worker in the art to which plaintiff's apparatus relates.

14. While both Johnson and Stoltzfus disclose a pair of impellers instead of a single impeller used by plaintiff, whether one or two impellers are used is a mere matter of choice or design not involving invention.

15. Claim 1, and, with it, claims 2, 3, 4, 5, 6, 16, 29, 30, and 31 in suit, do not define invention over the combination in which the horizontally rotating impellers as shown by Stoltzfus are substituted for the vertically rotating impellers as shown by Johnson.

16. The device as called for by claim 1 does not embody patentable subject matter over the prior art as exemplified by the Johnson patent and the Stoltzfus patent.

17. Conformably with the decision of the Board of Appeals, but upon consideration of the entire record before the Patent Office, as well as the testimony taken in open court, the depositions filed in the action, and the demonstrations made at the trial, claim 1, (203) and, with it, claims 2, 3, 4, 5, 6, 16, 29, 30, and 31 in suit, are unpatentable over the Johnson patent and the Stoltzfus patent.

18. Plaintiff's claims 29, 30, and 31 correctly were rejected as prolix by the tribunals below. By their length and recourse to minute details, these claims do not comply with the requirement of 35 U.S.C. (1952) 112 that an application for patent "shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention."

CONCLUSIONS OF LAW

(Filed August 25, 1955)

1. A claim for an invention should comply with the requirements of 35 U.S.C. (1952) 112, and should not be encumbered by excessive detail.

2. Plaintiff is not entitled to a patent containing any of claims 1, 2, 3, 4, 5, 6, 16, 29, 30, and 31 of application, Serial No. 95,114, in suit.

3. The complaint should be dismissed as to all of the claims in suit.

/s/ Joseph C. McGarraghy
Judge

Aug. 25, 1955

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(204)

JUDGMENT ENTRY

(Filed August 25, 1955)

This action came on to be heard at the last term, and thereupon upon consideration thereof, it is this 25th day of August, 1955

ADJUDGED that the complaint be and it is hereby dismissed on the merits, with costs against plaintiff.

/s/ Joseph C. McGarraghy
Judge

APPROVED AS TO FORM:

/s/ JAMES W. DENT
Attorney for Plaintiff.

define invention since they are merely differences in design within the skill of the ordinary skilled worker in the art to which plaintiff's apparatus relates.

14. While both Johnson and Stoltzfus disclose a pair of impellers instead of a single impeller used by plaintiff, whether one or two impellers are used is a mere matter of choice or design not involving invention.

15. Claim 1, and, with it, claims 2, 3, 4, 5, 6, 16, 29, 30, and 31 in suit, do not define invention over the combination in which the horizontally rotating impellers as shown by Stoltzfus are substituted for the vertically rotating impellers as shown by Johnson.

16. The device as called for by claim 1 does not embody patentable subject matter over the prior art as exemplified by the Johnson patent and the Stoltzfus patent.

17. Conformably with the decision of the Board of Appeals, but upon consideration of the entire record before the Patent Office, as well as the testimony taken in open court, the depositions filed in the action, and the demonstrations made at the trial, claim 1, (203) and, with it, claims 2, 3, 4, 5, 6, 16, 29, 30, and 31 in suit, are unpatentable over the Johnson patent and the Stoltzfus patent.

18. Plaintiff's claims 29, 30, and 31 correctly were rejected as prolix by the tribunals below. By their length and recourse to minute details, these claims do not comply with the requirement of 35 U.S.C. (1952) 112 that an application for patent "shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention."

CONCLUSIONS OF LAW

(Filed August 25, 1955)

1. A claim for an invention should comply with the requirements of 35 U.S.C. (1952) 112, and should not be encumbered by excessive detail.

2. Plaintiff is not entitled to a patent containing any of claims 1, 2, 3, 4, 5, 6, 16, 29, 30, and 31 of application, Serial No. 95,114, in suit.

3. The complaint should be dismissed as to all of the claims in suit.

/s/ Joseph C. McGarraghy
Judge

Aug. 25, 1955

(204)

JUDGMENT ENTRY

(Filed August 25, 1955)

This action came on to be heard at the last term, and thereupon upon consideration thereof, it is this 25th day of August, 1955

ADJUDGED that the complaint be and it is hereby dismissed on the merits, with costs against plaintiff.

/s/ Joseph C. McGarraghy
Judge

APPROVED AS TO FORM:

/s/ JAMES W. DENT
Attorney for Plaintiff.

MOTION FOR EXTENSION OF TIME TO TAKE APPEAL

(Filed Nov. 23, 1955)

Comes now the plaintiff in the above-entitled action, by James M. Earnest and James W. Dent, his attorneys of record, and moves the Court to extend the time within which an appeal may be taken from the Final Judgment entered in the above-entitled action, and for grounds therefor shows:

1. That a Final Judgment was entered in the above-entitled action on August 25, 1955.

2. That inasmuch as the United States, or any Agency thereof, is the named party defendant, the time within which an appeal could be taken from said Final Judgment was 60 days from the entry of said Judgment or on or before October 24, 1955.

3. That Rule 73(a) of the Federal Rules, As Amended, provides that upon a showing of excusable neglect based on a failure of a party to learn of the entry of the Judgment, the District Court, in any action, may extend the time for appeal, not exceeding 30 days from the expiration of the 60 day appeal period, as provided in said rule; and that under this rule, upon such showing, the time within which an appeal could be taken can be extended for 30 days from the expiration of said 60 day period, namely, October 24, 1955, or to and including November 23, 1955.

4. That by reason of the facts to be shown to the Court upon the argument of this motion, the court, in the exercise of its sound discretion, should so extend the time by reason of "excusable neglect" based on the failure of the plaintiff to learn of the entry of said Judgment, so that an appeal may be taken by the end of the day on November 23, 1955.

WHEREFORE, the premises considered, plaintiff prays that an Order by entered herein extending the time for the taking of an appeal from the aforesaid Judgment entered on August 25, 1955, to and including November 23, 1955.

/s/ James M. Earnest
JAMES M. EARNEST
1000 Woodward Bldg.
Washington, D. C.
/s/ James W. Dent
JAMES W. DENT
American Building
Washington, D. C.
Attorneys for Plaintiff.

ACKNOWLEDGEMENT OF SERVICE

I hereby acknowledge receipt of a copy of the foregoing Motion and Memorandum of Points and Authorities in support thereof, and hereby expressly consent to the granting of said motion.

/s/ C. W. Moore
CLARENCE W. MOORE
Solicitor, U. S. Patent Office
Attorney for Defendant.

ORDER EXTENDING TIME FOR TAKING AN APPEAL

(Filed Nov. 23, 1955)

This cause coming on to be further heard at this term upon the Motion of Plaintiff to extend the time for taking an appeal from the Final Judgment entered in the above-entitled action on August 25, 1955, for a period of 30 days from the expiration of the original time of 60 days for taking said appeal, or to and including November 23, 1955, on the ground of excusable neglect based on the failure of the plaintiff to learn of the entry of said Final Judgment, oral argument of counsel on behalf of plaintiff, and it further appearing to Court that the Solicitor of the United States Patent Office, counsel for defendant, has consented to the granting of this Motion, as is evidenced by his signature appearing hereon; wherefore, upon consideration thereof, it is by the Court this 23rd day of November, 1955,

ORDERED, that plaintiff's aforesaid Motion be, and the same hereby is granted; and it is further

ORDERED, that plaintiff's time to appeal from the Final Judgment entered in the above-entitled action on August 25, 1955, be, and the same is hereby extended to and including November 23, 1955.

JOSEPH C. McGARRAGHEY
JUDGE

I HEREBY EXPRESSLY CONSENT
TO THE ENTRY OF THE FOREGOING
/s/ C. W. Moore
CLARENCE W. MOORE, Solicitor
United States Patent Office
Attorney for Robert C. Watson
Commissioner of Patents

(208) NOTICE OF APPEAL

(Filed November 23, 1955.)

Notice is hereby given this 23d day of November, 1955, that Aubrey L. Jones, Plaintiff in the above-entitled action, hereby appeals to the United States Court of Appeals for the District of Columbia from the judgment of this Court entered on the 25th day of August, 1955 in favor of defendant, Robert C. Watson, Commissioner of Patents, against said Aubrey L. Jones, plaintiff.

/s/ James W. Dent
JAMES W. DENT
American Building
1317 F St., N.W.
Attorney for Plaintiff

DESIGNATION OF RECORD ON APPEAL

(Filed December 1, 1955.)

The following is designated as the record on appeal pursuant to Rule 75, Federal Rules of Civil Procedure:

1. The Complaint.
2. Answer to Complaint.
3. Depositions taken in Ottawa, Illinois.
4. Exhibits A to J inclusive introduced during taking of depositions, Item 3.
5. Transcript of Record during trial had March 21 and March 22, 1955.
6. Exhibits 1 to 10 inclusive introduced in Court at the trial.
7. Memorandum Opinion of Judge McGarraghy dated June 30, 1955.
8. Findings of Fact and Conclusions of Law.
9. Judgment entered August 25, 1955.

10. Motion to Extend Time of filing Notice of Appeal.
11. Order extending time for filing Notice of Appeal.
12. Notice of Appeal.
13. This Designation of Record.
14. Motion to Transmit original exhibits.
15. Order to Transmit original exhibits.

Respectfully,

/s/ J. W. D.
Attorney for Appellant
Aubrey L. Jones

I hereby certify that a copy of the foregoing Designation of Record on Appeal was forwarded by first class mail, this 1st day of December, 1955 to Clarence W. Moore, United States Patent Office, Washington 25. D. C., Attorney for Defendant, Watson.

/s/ J. W. D.

MOTION TO TRANSMIT ORIGINAL EXHIBITS TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA

(Filed Dec. 29, 1955)

Plaintiff moves the Court for an order transmitting some of the original exhibits listed as Items 4 and 6 of Plaintiff's Designation of Record on Appeal to the United States Court of Appeals for the District of Columbia in lieu of copies thereof.

Exhibit B — Certified copy of British Patent 584,809.
Exhibit D — Certified copy of U. S. Patent 2,281,212.
Exhibit E — Certified copy of U. S. Patent 2,500,681.

Exhibit #2 — Bottle of phosphate.
Exhibit #3 — Bottle of super phosphate.
Exhibit #4 — Bottle of limestone.
Exhibit #5 — Model of truck.
Exhibit #6 — Spreader attachment.
Exhibit #7 — Model of truck.
Exhibit #10 — Certified copy of the file wrapper and contents of Plaintiff's application before the Patent Office.

It is further moved that the certified copy of the file wrapper and contents of Plaintiff's application filed with this Motion be accepted and forwarded to the U. S. Court of Appeals for the District of Columbia in lieu of the original copy presented at the trial in view of the fact that such original copy has become lost. The original Exhibit #10 was left with the Court after trial and was never returned to the Plaintiff's counsel and has now become lost.

The grounds for this Motion are:

1. It is necessary that the certified copy of the file wrapper and contents of Plaintiff's application be a part of the record inasmuch as this is the basis of the suit.

2. Exhibits B, D, E and # 10 comprise numerous sheets of photostatic copies and would place Plaintiff to an unnecessary expense to copy such material.

3. The other exhibits are physical exhibits incapable of reproduction and are now in the hands of Plaintiff's attorney and will be produced in Court.

JAMES W. DENT
Attorney for Plaintiff

NO OBJECTIONS
/s/ C. W. Moore

. . . .

Attorney for Defendant
Robert C. Watson

ORDER TO TRANSMIT ORIGINAL EXHIBITS TO THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA

(Filed Dec. 30, 1955)

Upon motion of Plaintiff, it is ordered that some of the exhibits listed in Items 4 and 6 of Plaintiff's Designation of Record on Appeal taken and received at the trial be transmitted to the United States Court of Appeals for the District of Columbia.

Such exhibits are:
Exhibit B — Certified copy of British patent 584,809
Exhibit D — Certified copy of United States Patent 2,281,212
Exhibit E — Certified copy of United States Patent 2,500,681.
Exhibit #2 — Bottle of Phosphate.
Exhibit #3 — Bottle of super phosphate.
Exhibit #4 — Bottle of limestone.
Exhibit #5 — Model of truck.
Exhibit #6 — Spreader attachment.
Exhibit #7 — Model of truck.
Exhibit #10 — Certified copy of the file wrapper and contents of Plaintiff's application before the Patent Office.

It is further ordered that the certified copy of the file wrapper and contents of Plaintiff's application filed with the Motion be accepted and transmitted to the United States Court of Appeals for the District of Columbia in lieu of the original Exhibit #10.

JAMES W. MORRIS
United States District Judge.

APPROVED AS TO FORM

/s/ James W. Dent
Attorney for Plaintiff,
Aubrey L. Jones

/s/ C. W. Moore
Attorney for Defendant,
Robert C. Watson.

ALLOWED CLAIM

(21) 7. A spreader attachment for a pulverulent distributor of the type characterized by a hopper having a discharge port and impeller means for rendering airborne particles of material discharged thru said discharge port, said attachment comprising a substantially U-shaped central portion dimensioned to enclose the discharge port and said impeller means, said central portion including front, top and rear walls, and a pair of U-shaped end portions each including front, top, rear and outer end walls, wherein the overall length dimension of each of said end portions approximates twice the length dimension of said central portion, a baffle member disposed in and transversely of each end portion about midway of its length for intercepting the passage of particles projected into said end portions which are too heavy to be airborne, said end portions hingedly secured to said central portion for movement between lowered and raised positions relative thereto, said end portions when in lowered position combining with said central portion to define an elongated open-bottomed chamber within which airborne pulverulent material from said hopper will accumulate on opposite sides of said baffles in sufficient concentration to effect a substantially uniform gravitational depositation thru said open bottom, and means operable for securing said central portion to the hopper of a pulverulent distributor.

CLAIMS IN SUIT

1. An attachment for converting a conventional mobile rotary disc-type spreader for free flowing solid materials into a spreader for pulverulent material such as phosphate, wherein the conventional spreader includes a hopper having a discharge port and substantially horizontally disposed rotatable impeller means carried by a substantially vertically disposed shaft for rendering airborne particles of material discharged through said discharge port, said attachment comprising a central portion dimensioned to enclose the discharge port and said impeller means, said central portion including front, top and rear walls, and a pair of end portions each including front, top, rear and outer end walls, said end portions hingedly secured to said central portion for movement between lowered and raised positions relative thereto, said end portions when in lowered position combining with said central portion to define an elongated unobstructed open-bottomed chamber within which chamber pulverulent material from said hopper is rendered airborne due to rotation of the said impeller means and will accumulate in sufficient concentration to effect a substantially uniform gravitational depositation through said open bottom without any appreciable blow away of the material and thus effect a uniform application of the material on the ground, means for securing said central portion to the hopper of a pulverulent distributor, and means for rotating the impeller shaft.

2.* An attachment for converting a conventional mobile rotary disk-type spreader for free-flowing solid materials into a spreader for pulverulent material such as phosphate, wherein the conventional spreader includes a hopper having a discharge port and rotatable impeller means for rendering airborne particles of material discharged thru said discharge port and means for rotating the impeller means; said attachment comprising a central portion dimensioned to enclose the discharge port and said impeller means, said central portion including front, top and rear walls, and a pair of end portions each including front, top, rear and outer end walls, *said end portions hingedly secured along their top walls one each to an opposite edge of the top wall of said central portion for vertical movement between lowered and raised positions relative thereto,* said end portions when in lowered position combining with said central portion to define an elongated open-bottomed chamber within which chamber pulverulent material from said hopper is rendered airborne due to rotation of said impeller means and will accumulate in sufficient concentration to effect a substantially uniform gravitational deposition thru said open bottom without any appreciable blow away of the material and thus effect a uniform application of the material on the ground, means for securing said central portion to the hopper of a pulverulent distributor, *and flexible means surrounding, attached to and depending from the lower perimeter of said central and end portions for increasing the effective volume of said chamber and locating the discharge zone of pulverulent material closely adjacent the ground.*

---

* Matter in italics indicates distinguishing portion of claim from Claim 1.

3.* An attachment for converting a conventional mobile rotary disk-type spreader for free-flowing solid materials into a spreader for pulverulent material such as phosphate, wherein the conventional spreader includes a hopper having a discharge port and rotatable impeller means for rendering airborne particles of material discharged thru said discharge port and means for rotating the impeller means, said attachment comprising a central portion dimensioned to enclose the discharge port and said impeller means, said central portion including front, top and rear walls, and a pair of end portions each including front, top, rear and outer end walls, *wherein the overall length dimension of each end portion is of a dimension from one to three times the overall length of said central portion,* said end portions hingedly secured to said central portion for vertical movement between lowered and raised positions relative thereto, said end portions when in lowered positions combining with said central portion to define an elongated open-bottomed chamber within which chamber pulverulent material from said hopper is rendered airborne due to rotation of said impeller means and will accumulalte in sufficient concentration to effect a substantially uniform gravitational depositation thru said open bottom without any appreciable blow away of the material and thus effect a uniform application of the material on the ground, and means for securing said central portion to the hopper of a pulverulent distributor.

4.* An attachment for converting a conventional mobile rotary disk-type spreader for free-flowing solid materials into a spreader for pulverulent material such as phosphate, wherein the conventional spreader inclues a hopper having a discharge port and impeller means for rendering airborne particles of material discharged thru said discharge port and means for rotating the impeller means, said attachment comprising a central portion dimensioned to enclose the discharge port and said impeller means, said central portion including front, top and rear walls, and a pair of end portions each including front, top, rear and outer end walls, *wherein the width of each end portion uniformly reduces from a maximum adjacent the center portion to a minimum adjacent its respective outer end,* said end portions hingedly secured to said central portion for vertical movement between lowered and raised positions relative thereto, said end portions when in lowered position combining with said central portion to define an elongated open-bottomed chamber within which chamber pulverulent material from said hopper is rendered airborne due to rotation of the impeller means and will accumulate in sufficient concentration to effect a substantially uniform gravitational depositation thru said open bottom without any appreciable blow away of the material and thus effect a uniform application of the material on the ground, and means for securing said central portion to the hopper of the pulverulent distributor.

5.* An attachment for converting a conventional mobile rotary disk-type spreader for free-flowing solid materials into a spreader for pulverulent material such as phosphate, wherein the conventional spreader includes a hopper having a discharge port and rotatable impeller means for rendering airborne particles of material discharged through said discharge port, means for rotating the impeller means, said attachment comprising a central portion dimensioned to enclose the discharge port and said impeller means, said central portion including front, top and rear walls, and a pair of end portions each including front, top, rear, and outer end walls, *wherein the width of said end portions adjacent said center portion is substantially equal to the width dimension of said center portion, said width being of a dimension from two to four times greater than the width of said end portions adjacent their outer ends,* said end portions hingedly secured to said central portion for vertical movement between lowered and raised positions relative thereto, said end portions so proportioned that when in lowered position they combine with said central portion to define an elongated open-bottomed chamber within which chamber pulverulent material from said hopper is rendered airborne due to rotation of the impeller means and will accumulate in sufficient concentration to effect a substantially uniform gravitational deposition through said open bottom without any appreciable blow away of the material and thus effect a uniform application of the material on the ground, and means for securing said central portion to the hopper of the pulverulent distributor.

6.* An attachment for converting a conventional mobile rotary disk-type spreader for free-flowing solid materials into a spreader for pulverulent material such as phosphate, wherein the conventional spreader includes a hopper having a discharge port and rotatable impeller means for rendering airborne particles of material discharged thru said discharge port and means for rotating the impeller means, said attachment comprising a central portion dimensioned to enclose the discharge port and said impeller means, said central portion including front, top and rear walls, and a pair of end portions each including front, top, rear and outer end walls, *wherein the overall length dimension of each end portion is from one to three times the overall length of said central portion, and wherein the width of each end portion tapers from a maximum equal to the width of said central portion at its inner end to a minimum width of from one-fourth to one-half of their maximum width at its outer end,* the top portions of said end portions hingedly secured to the top of said central portion for vertical movement between lowered and raised positions relative thereto, said end portions when in lowered position combining with said central portion to define an elongated open-bottomed chamber within which chamber pulverulent material from said hopper is rendered airborne due to rotation of the impeller means and will accumulate in sufficient concentration to effect a substantially uniform gravitational depositation thru said open bottom, without any appreciable blow away of the material and thus effect a uniform application of the material on the ground, and means for securing said central portion to the hopper of the pulverulent distributor.

16.* An attachment for converting a conventional mobile rotary disk-type spreader for free-flowing solid materials into a spreader for pulverulent material such as phosphate, wherein the conventional spreader includes a hopper having a discharge port and rotatable impeller means for rendering airborne particles of material discharged through said discharge port and means for rotating the impeller means, said attachment comprising a central portion dimensioned to enclose the discharge port and said impeller means, said central portion including front, top and rear walls, means operable for securing said central portion to the hopper of a pulverulent distributor, *a pair of intermediate end portions each including front, top and rear walls, a pair of U-shaped outer end portions each including front, top, rear and outer end walls, said intermediate end portions hingedly secured to said central portion for movement between lowered and raised positions relative thereto, each outer portion hingedly secured to an intermediate end portion for movement between raised and lowered positions relative thereto, said intermediate and outer end portions when in lowered position combining with said central portion* to define an elongated open-bottomed chamber within which chamber pulverulent material from said hopper is rendered airborne due to rotation of said impeller means and will accumulate in sufficient concentration to effect a substantially uniform gravitational depositation through said open bottom without any appreciable blow away of the material and thus effect a uniform application of the material on the ground, and *said outer end portions foldable upwardly over their respective intermediate end portions and said intermediate* *end portions foldable upwardly toward each other and above said central portion for disposing said intermediate and outer end portions in compact, raised, inoperative relationship.*

29.* An attachment for converting a conventional mobile disk-type spreader for free-flowing solid materials into a spreader for pulverulent material such as phosphate, wherein the conventional spreader includes a material hopper having a discharge port at the rear end of the spreader, and a rotary disk-type material distributor which projects beyond and is secured to the rear end of the spreader and is positioned below the discharge port, means for discharging material from the hopper through said port and onto the rotary distributor disk, and means for rotating the distributor disk for distributing free-flowing solid material discharged thereon in all radial directions by centrifugal action; the said attachment comprising a central portion *consisting of rigid imperforate front, top and rear walls which exclude the passage of air therethrough,* the central portion being open at its bottom, and along its opposite ends, means for securely though detachably securing the central portion on the rear end of a conventional spreader to completely enclose the discharge port and the distributor, a pair of similarly formed elongated, hollow and interiorly unobstructed end portions each including imperforate connected together front, top, rear and end walls, said end portions being unobstructedly open at their bottoms, the length of each end portion being greater than the length of the central portion, means hingedly connecting the end portions to opposite ends of the central portion for substantially vertical movement between lowered operative and raised inoperative positions relative to the central portion, said end portions when in lowered position combining with the opposite ends of the central portion to define an elongated open-bottomed chamber containing the conventional discharge port and rotary distributor in the central portion thereof, flexible imperforate means depending from the lower bottom-defining edges of the individual central and end portions and substantially conforming in outline to the open bottoms of their respective central and end portions for enlarging the effective area of said chamber, the flexible means having extreme free and unobstructed lower edge portions which define an unobstructed open bottom of the enlarged chamber, whereby upon rotation of the distributor and discharge of pulverulent material from the port onto the distributor, the pulverulent material is rendered airborne solely by the action of said distributor, and the material which is thus airborne accumulates, concentrates and entirely fills the enlarged chamber, thus resulting in a substantially uniform and continuous gravitational discharge of the pulverulent material throughout the entire length and breadth of the open bottom of the enlarged chamber directly onto the ground within the confines of the chamber as defined by the said lower edge portion of the flexible means, and means for supporting said end portions in lowered operative position or in raised inoperative position relative to the central portion.

30. An attachment for a conventional spreader as defined in and by Claim 29 wherein the overall length dimension of each end portion is from one to three times the overall length of the central portion and wherein the width of each end portion converges uniformly from the central portion to the end of each portion to a width of from one-half to one-fourth the width of the central portion.

31. An attachment for a conventional spreader as defined in and by Claim 29 wherein each end portion is subdivided intermediate its ends for defining inner and outermost parts, means hingedly connecting the top walls of said inner and outermost parts for substantially vertical movement between lowered operative and raised inoperative positions, said outermost parts foldable back onto the innermost part when in inoperative position.

BRIEF FOR APPELLANT

United States Court of Appeals

For The District of Columbia

United States Court of Appeals
For the
District of Columbia Circuit
FILED FEB 1 0 1956
Joseph W. Stewart
CLERK

No. 13,050

AUBREY L. JONES,
Appellant,

vs.

ROBERT C. WATSON,
Commissioner of Patents,
Appellee.

Appeal from Final Judgment of The United States District Court for The District of Columbia

J. WARREN KINNEY, JR.,
506 First National Bank Bldg.,
Cincinnati 2, Ohio.
Attorney for Appellant.

JAMES W. DENT,
500 American Building,
Washington 4, D.C.
OF COUNSEL.

COURT INDEX PRESS, INC. — Law Printers — 809 Walnut St., Cincinnati, O.

STATEMENT OF QUESTION PRESENTED

The question is whether Appellant's "attachment" for and which converts a *conventional* rotary disc-type spreader for free-flowing solid materials into a highly efficient spreader for pulverulent materials — (wherein the said "attachment" comprises an open-bottomed housing in which pulverulent material rendered airborne by the conventional disc-type impellers is ACCUMULATED in such concentration that the pulverulent particles will *gravitationally* settle out onto the ground in an even pattern) — embodies patentable subject matter over the prior art as exemplified by the British patent to Johnson for a pulverulent distributor having three vertically rotating drum-type paddle wheel impellers which hurl and blow pulverulent particles to the ground along *trajectories* which are merely *shielded* from wind currents by a pair of shrouds; and the Stoltzfus U. S. patent for a distributor having horizontally rotating disc-type impellers housed within a depending curtain which merely *maintains* the NORMAL distribution pattern of the impellers on a windy day; and whether Appellant made a useful discovery not taught by the prior art which gives an unobvious result which has substantially advanced the art.

UNITED STATES COURT OF APPEALS

For the District of Columbia

No. 13050

AUBREY L. JONES,
Appellant,
vs.
ROBERT C. WATSON,
Commissioner of Patents,
Appellee.

Appeal from Final Judgment of The United States District Court for The District of Columbia

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JURISDICTIONAL STATEMENT

This is a civil action under Title 35 U. S. C., Sec. 145, by Plaintiff-Appellant, Aubrey L. Jones, inventor of patent application Serial No. 95,114, filed May 24, 1949, against Defendant-Appellee, Robert C. Watson, Commissioner of Patents, for a judgment authorizing the Commissioner to issue a patent containing claims 1, 2, 3, 4, 5, 6, 16, 29, 30 and 31 of that Application to Plaintiff. The jurisdiction is set out in the Complaint, App. 1*.

After a trial on testimony of Aubrey Jones and Fred E. Hardy, the depositions of Glenn A. Duis and Raymond Hatala, the demonstrations of models of the references, and a showing of a motion picture of Appellant's device, the District Court rendered an opinion, App. 239, in favor of the Commissioner refusing all of the claims in suit, and approved the Findings of Fact, Conclusions of Law and Judgment submitted by the Commissioner, App. 242, dismissing the Complaint. This appeal is under Title 28 U. S. C. Secs. 1291 and 1294.

STATEMENT OF CASE

Appellant, Aubrey L. Jones, by application Serial No. 94,115, filed May 24, 1949, Plaintiff's Exhibit 10, App. 109, sought a patent for an "APPARATUS FOR DISTRIBUTING PULVERULENT MATERIAL". The Patent Office allowed Claim 7, but disallowed Claims 1, 2, 3, 4, 5, 6, 16, 29, 30 and 31, as unpatentable over the prior art as disclosed in the Johnson (Great Britain) patent No. 584,809, Stoltzfus (U. S.) patent No. 2,281,212 and Hoffstetter (U. S.) patent No. 2,500,681, App. 237, 238.

An appeal was taken to the Patent Office Board of Appeals, App. 251, which affirmed the rejection of the claims here in suit in an opinion dated January 30, 1953, App. 223; whereupon Appellant filed Civil Action 1304-53. At the trial before the District Court, Claim 1 was considered as "representative", since counsel for Defendant-Appellee advised the Court that it "need not give consideration to the Hoffstetter patent since it has been agreed by both sides that the right of plaintiff to a patent containing Claims 1, 2, 3, 4, 5, 6 and 16 *may be resolved by consideration of Claim 1 alone"*, App. 243.

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* App. has reference to the Joint Appendix.

The District Court rendered judgment, App. 247, dismissing the Complaint. Appeal was taken from that judgment, App. 251.

Appellant's Device

Appellant's invention relates to an *ATTACHMENT* for converting a *conventional* DISC-type spreader for FREE FLOWING SOLID MATERIALS into a highly efficient spreader for PULVERULENT materials.

Rotary DISC-type spreaders, see App. 208, have been extensively used for many years to distribute or apply free flowing *solid materials* such as sand, limestone, rock salt, cinders, etc. in an *even, uniform* ground pattern.

For convenience of the Court Appellant submits here-

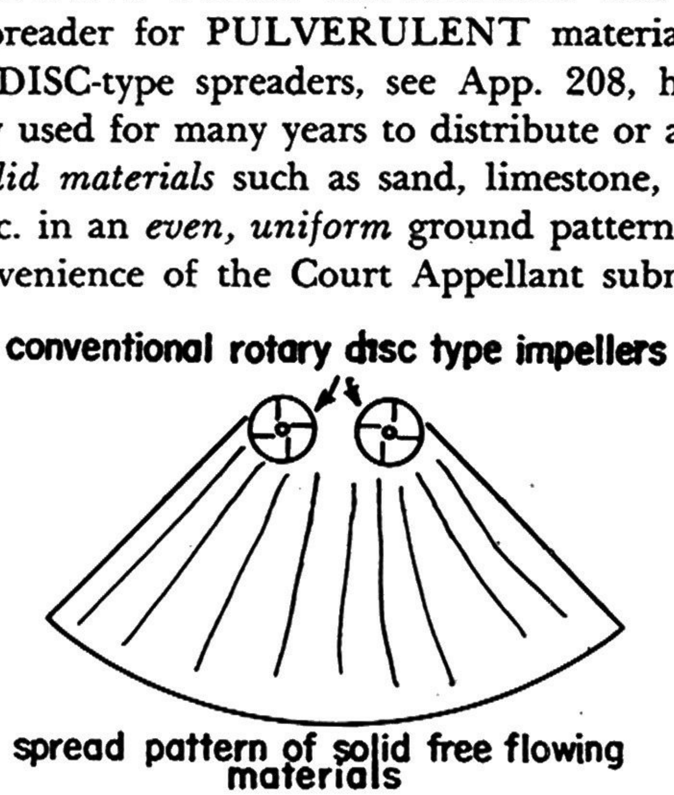
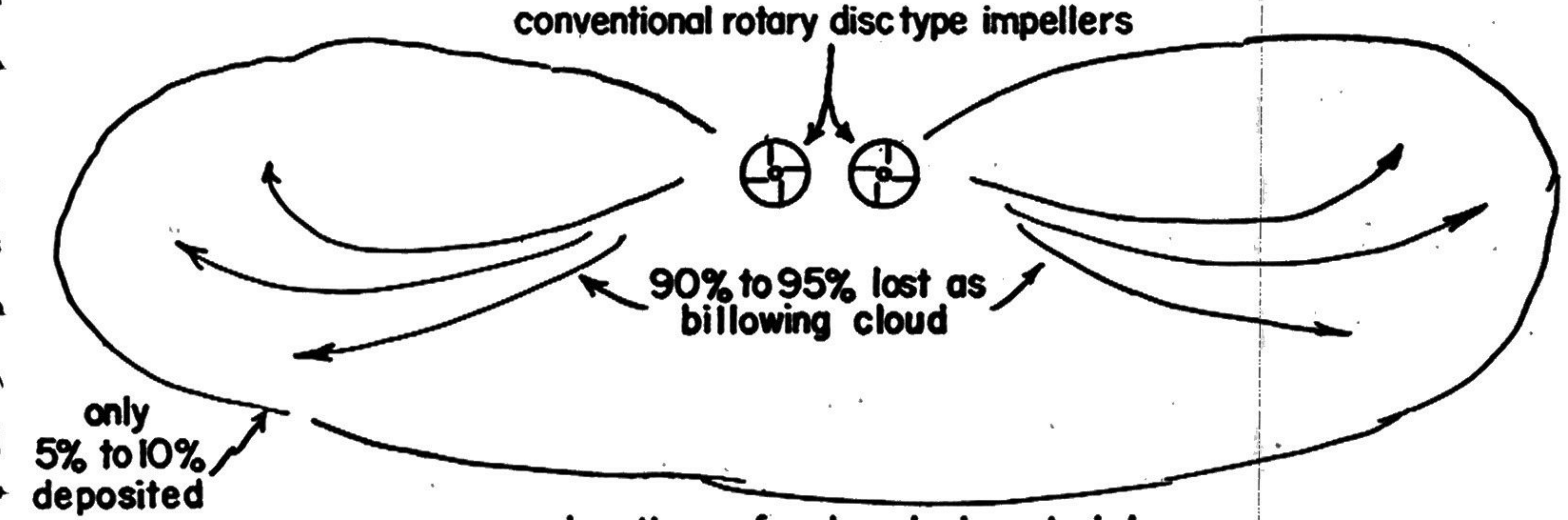

conventional rotary disc type impellers
spread pattern of solid free flowing materials

PLATE I

with a diagramatic sketch, Plate I, illustrating a TOP VIEW of the "spread pattern" of a conventional rotary disc-type spreader when spreading free flowing SOLID materials (from HATALA deposition, App. 50).

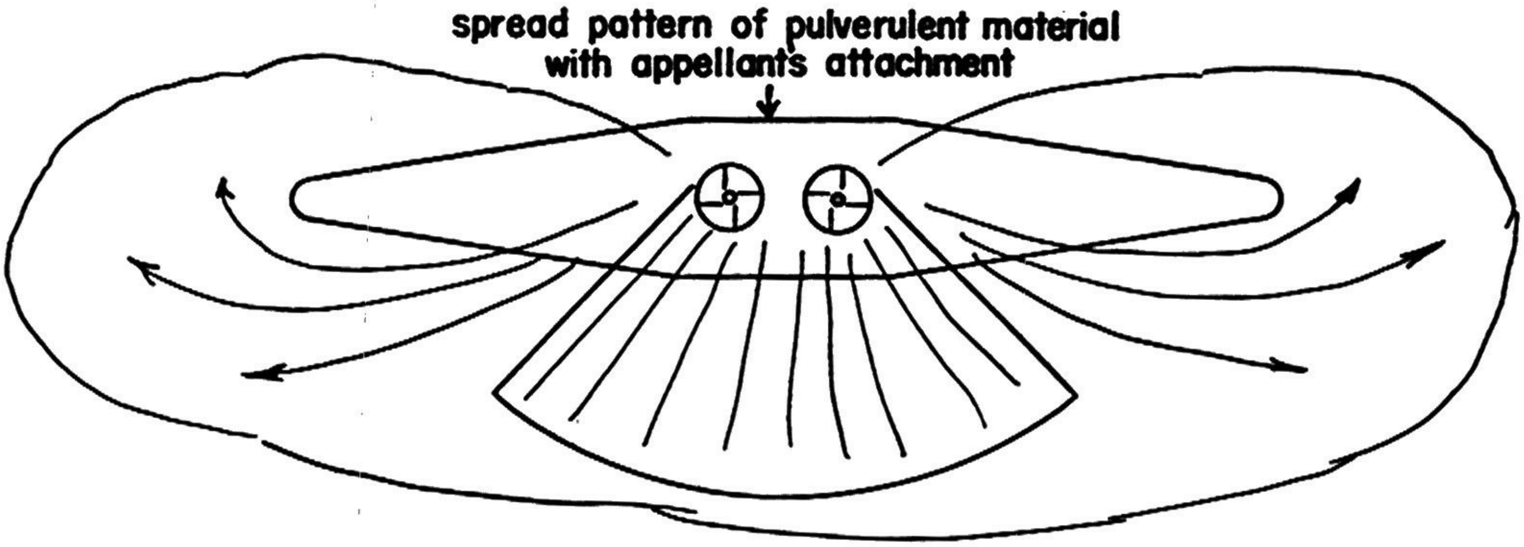
However, when PULVERULENT materials such as phosphates or super-phosphates are substituted for free-flowing SOLID materials (sand, limestone, etc.) in a rotary disc-type spreader, ONLY 5% to 10% of the pulverulent material will be applied to the ground in the vicinity of the device, see Plate II, *the other 90% to 95% of the pulverulent material will be dissipated as a BILLOWING CLOUD,* App. 33; 209, which is ultimately deposited in treetops, on roofs, on adjoining fields, distant roads and other remote places often a mile or more from the spreader!


conventional rotary disc type impellers
90% to 95% lost as billowing cloud
only 5% to 10% deposited

spread pattern of pulverulent material

PLATE II

Appellant devised an *attachment* which when associated with a conventional rotary disc-type spreader for *free flowing solid materials,* enabled *ALL* pulverulent material to be UNIFORMLY and EVENLY applied onto the ground in a manner similar to painting, note Plates III and IV.


spread pattern of pulverulent material with appellant's attachment

comparison of spread patterns of conventional rotary disc type impellers of Plates I and II with pattern when using appellant's attachment

PLATE III

PLATE IV

Prior Art

a. Johnson (British Patent)

The *principal* reference relied on by the Patent Office and the District Court for negating invention in Claim 1 of Appellant's application is a device shown in the British patent No. 584,809 to Johnson, App. 235. The Johnson device comprises a DISTRIBUTING MECHANISM, PER SE, which is adapted to be bodily secured to and beneath the discharge port of a hopper for transversely distributing powdered fertilizers including super-phosphate.

The Johnson distributor consists of two transversely spaced MAIN *drum-type paddle wheel impellers* and a third supplementary rotary impact impeller located below and between the MAIN impellers. Each of the three impellers rotates in a vertical plane. The MAIN impellers are rotated in opposite directions for hurling powdered fertilizer in opposite directions. The supplementary impeller is utilized to distribute powdered fertilizer in a central area beneath and between the two MAIN impellers.

Johnson discloses, as an *essential* feature of his device, a pair of high velocity centrifugal fans which draw in OUTSIDE AIR through six air-intake ports 72, the OUTSIDE air being projected in two *independent* high velocity streams in opposite directions, the said high velocity streams of OUTSIDE air functioning to assist the paddle wheels in imparting a *trajectory* to fertilizer particles being hurled and *blown* from a MAIN paddle wheel toward the ground.

Johnson further discloses a pair of hinged shrouds for protecting the *trajectory* of the powdered fertilizer from the effects of wind. The District Court found in its Finding of Fact No. 5, App. 244, that (in Johnson) "each shroud is effective to SHIELD the *stream* of powdered fertilizer, coming from the impact member, *beyond the lateral confines of the machine,* * * *". (emphasis added)

A working model of the distributor mechanism and its associated shrouds of the device of the Johnson patent was operated before the District Court on granular material, phosphate, super-phosphate, and talc. The purpose of the demonstration was to show that the "distribution pattern" of the drum-type paddle wheel impellers of the British patent was the same whether the shrouds were in raised or lowered positions when distributing any given material.

The Johnson patent does not disclose or suggest a device in which a *STREAM* OF POWDERED FERTILIZER can "accumulate" — nor does it disclose or suggest a device in which powdered fertilizer can be "concentrated" *while airborne* so that the particles can settle out by gravity onto the ground, as in Appellant's device.

b. Stoltzfus

The *secondary* reference relied on by the Patent Office and District Court was the Stoltzfus (U. S.) patent No.

Fig. 3.

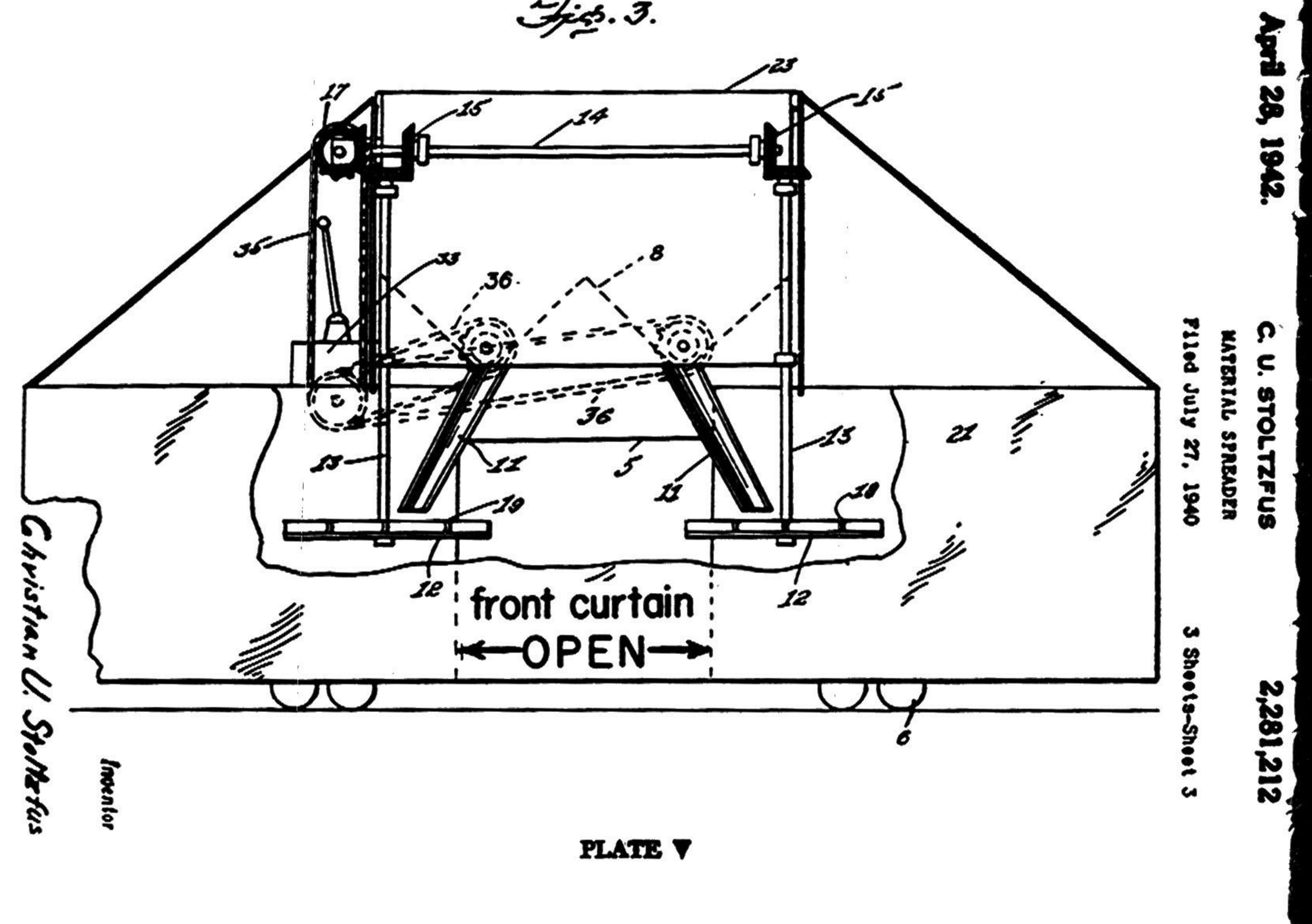


PLATE V

2,281,212, App 237. This patent discloses a special rotary disc-type spreader for free-flowing solid materials (and compost) in which the impellers have been laterally separated and placed at the sides of the truck body to increase their distribution pattern. Stolztfus also discloses a depending curtain for enclosing the top, sides, rear and *part* of the front of an area surrounding the horizontal disc-type impellers for merely preventing disturbance of the *NORMAL* DISTRIBUTION PATTERN OF THE IMPELLERS ON A WINDY DAY. Stoltzfus has a *huge opening* in his front curtain, note Plate V, page 6, this brief, through which OUTSIDE AIR is drawn to his impellers, as in Johnson, for providing a NORMAL distribution pattern. The notation "front curtain OPEN" has been added to Plate V, for emphasis, by Appellant.

A model of the device of the Stoltzfus patent was operated before the District Court on both granular and pulverulent material with the curtain in both raised and lowered positions to show that *the distribution pattern is the same whether the curtains be raised or lowered.*

The Stoltzfus patent neither discloses nor suggests a device having means for changing or in any way altering the NORMAL distribution characteristics and pattern of its horizontally rotating disc-type impellers. This reference discloses a crude but operable version of a rotary disc-type spreader having a wind curtain which merely SHIELDS the *normal* stream of fertilizer coming from the impact members. It does not disclose or suggest the means, disclosed by Appellant, necessary to ALTER the normal distributing characteristics of the impellers to enable pulverulent material to ACCUMULATE and CONCENTRATE, *while airborne,* so that the particles can *settle* out onto the ground.

Record

Appellant took the depositions of Glenn A. Duis and Raymond F. Hatala at Streator, Illinois, App. 5, 32, the Defendant-Appellee having been represented at the depositions by counsel, who cross-examined the witnesses. The uncontradicted testimony of Duis was to the effect that Appellant's attachment ALTERS THE OPERATING CHARACTERISTICS of the conventional disc-type impellers of Plate I, supra. Both Duis and Hatala drew sketches (Exhibits C, F, and G, App. 48, 49, 50) illustrating not only the manner in which Appellant's attachment ALTERS the distributing characteristics of a conventional rotary disc-type spreader, but also the manner in which a conventional rotary disc-type spreader equipped with Appellant's attachment differed from the device of the Johnson patent.

The patent office proceedings, (Exhibit 10, pages 151-2-3) App. 208, contain the *unchallenged* and *uncontradicted* affidavit of Ray F. Hatala to the effect:

1. That Super Phosphate has been commercially available since 1890 for agricultural purposes, Super Phosphate being a pulverulent, finely powdered substance which presents formidable distribution problems while being spread onto the ground, and

2. That (in 1951) commercial impeller-type limestone spreaders have been widely used in the United States for the past 18 to 20 years for spreading free-flowing solid materials such as limestone, chips, cinders, sand, etc., and

* * *

3. That prior to the introduction of the Aubrey L. Jones attachment for commercial limestone spreader in 1948 no efficient, inexpensive means was available for spreading highly pulverulent material such as Super Phosphate. However, Super Phosphate was commercially

spread, in bulk, for lack of better means, by conventional limestone spreaders. Such method was highly unsatisfactory and uneconomical because the distribution pattern could not be controlled since the phosphate would be discharged as a billowing mass of fine, powdery material over which there was no control, and

4. That *the attachment of Aubrey L. Jones,* as more fully set forth in the presently pending Jones patent application Serial No. 95,114, filed May 24, 1949, entitled "APPARATUS FOR AND METHOD OF DISTRIBUTING PULVERULENT MATERIAL", *enabled Super Phosphate to be rapidly, effectively and evenly spread, in a manner analogous to painting, directly onto the ground from a standard or conventional limestone spreader,* and

5. That the said Jones attachment for converting a standard limestone spreader to a spreader for pulverulent material such as Super Phosphate has *simplified and revolutionized the technique of distributing pulverulent material such as Super Phosphate.* (emphasis added)

At the trial the uncontradicted testimony of the Plaintiff-Appellant and Fred E. Hardy, Jr., a professional engineer familiar with Appellant's device, was made of record, App. 66, and a motion-picture showing an attachment (embodying the teachings of the appealed claims) secured to a conventional rotary disc-type spreader for free flowing solid materials, was shown to the Court for disclosing the effective manner in which Appellant's attachment enabled pulverulent material to be spread directly onto the ground, App. 58, as in Plate IV, page 4 hereof.

The record further establishes that the Anthony Co., although aware of the teachings of the Johnson and Stoltzfus patents, nevertheless entered into a licensing agreement with Appellant, which agreement terminated only after the Anthony Co. discontinued the manufacture and sale of rotary disc-type spreaders, App. 12.

The Defendant-Appellee produced no witnesses.

The District Court sustained the Patent Office and found that it was obvious and devoid of invention to substitute the horizontally rotating impellers shown by Stoltzfus for the vertically rotating impellers as shown by Johnson.

The Court further held that both Johnson and Stoltzfus disclosed *"a structure"* having similar elements to those of the claim in suit, App. 245.

The Court further held that claims 29, 30 and 31 were properly rejected by the Patent Office as prolix, App. 246.

STATUTES INVOLVED

Title 28 U. S. C. A., Sec. 1291, June 25, 1948, c. 646, 62 Stat. 929.

> "The courts of appeals shall have jurisdiction of appeals from all final decisions of the district courts of the United States, the District Court for the Territory of Alaska, the United States District Court for the District of the Canal Zone, and the District Court of the Virgin Islands, except where a direct review may be had in the Supreme Court."

Title 28 U. S. C. A., Sec. 1294, June 25, 1948, c. 646, 62 Stat. 930.

> "Appeals from reviewable decisions of the district and territorial courts shall be taken to the courts of appeals as follows:
>
> (1) From a district court of the United States to the Court of appeals for the circuit embracing the district;—"

Title 35 U. S. C. A., Sec. 4 (a), July 19, 1952, c. 950, 66 Stat. 815.

> "This Act (this title) shall take effect on January 1, 1953 and shall apply to all applications for patent filed on or after such date and to all patents granted on such

applications. It shall apply to further proceedings on applications pending on such date and to patents granted on such applications except as otherwise provided. It shall apply to unexpired patents granted prior to such date except as otherwise provided."

Title 35 U. S. C. A., Sec. 101, July 19, 1952, c. 950, Sec. 1, 66 Stat. 797.

"Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title."

Title 35 U. S. C. A., Sec. 102, July 19, 1952, c. 950, Sec. 1, 66 Stat. 797.

"A person shall be entitled to a patent unless —
(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent. —"

Title 35 U. S. C. A., Sec. 103, July 19, 1952, c. 950, Sec. 1, 66 Stat. 798.

"A patent may not be obtained though the invention is not identically disclosed or described as set forth in Section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made."

Title 35 U. S. C. A., Sec. 112, July 19, 1952, c. 950, Sec. 1, 66 Stat. 798.

"The specification shall contain a written description of the invention, and of the manner and process of

> making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.
>
> "The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention." * * *

Title 35 U. S. C. A., Sec. 145, July 19, 1952, c. 950, Sec. 1, 66 Stat. 803.

> "An applicant dissatisfied with the decision of the Board of Appeals may unless appeal has been taken to the United States Court of Customs and Patent Appeals, have remedy by civil action against the Commissioner in the United States District Court for the District of Columbia if commenced within such time after such decision, not less than sixty days, as the Commissioner appoints. The court may adjudge that such applicant is entitled to receive a patent for his invention, as specified in any of his claims involved in the decision of the Board of Appeals, as the facts in the case may appear and such adjudication shall authorize the Commissioner to issue such patent on compliance with the requirements of law. All the expenses of the proceedings shall be paid by the applicant."

STATEMENT OF POINTS

(1) The District Court erred in following the reasoning and in sustaining the decision of the Patent Office in refusing a patent to Appellant with the claims in suit.

(2) The Court's Findings of Fact No. 7, App. 245, that the patents to Johnson and Stoltzfus each clearly disclose a structure having similar elements to those in Claim 1 in suit, which comprise an attachment to a vehicle body

to which the spreader is attached, is not supported by the evidence and is clearly erroneous and contrary to the uncontradicted evidence.

(3) The Court's Finding of Fact No. 12, App. 245, that it is obvious and devoid of invention to substitute the horizontally rotating impellers as shown by Stoltzfus for the vertically rotating impellers as shown by Johnson, is not supported by the evidence and is clearly erroneous and contrary to fact.

(4) The Court's Finding of Fact No. 13, App. 245, that the details of the size, shape and proportions of the housing or attachment parts as set forth in Appellant's application and claims in suit, are matters which in no way define invention, since they are merely differences in design within the skill of the ordinary skilled worker in the art to which Appellant's apparatus relates, is not supported by the evidence and is clearly erroneous and contrary to fact.

(5) The Johnson (British) patent No. 584,809 does not disclose the subject matter of the claims in suit and does not disclose a device in which airborne pulverulent material is or can "accumulate" in such concentration that pulverulent particles will then gravitationally settle out onto the ground in an even pattern.

(6) To replace the vertically rotating drum-type paddle wheel impellers of Johnson No. 584,809 with the horizontally rotating impellers of Stoltzfus No. 2,281,212 destroys the teachings, structural and functional characteristics of the Johnson patent.

(7) Appellant is entitled to a patent on the application in suit involving the claims thereof.

SUMMARY OF ARGUMENT

The District Court, like the Patent Office, has subconsciously evaluated and then found Appellant's inventive concept in the prior art IN THE LIGHT OF HINDSIGHT *AFTER* APPLICANT'S DISCLOSURE AND EXPLANATION.

The Johnson (British) reference is a *pulverulent* distributor per se, having shrouds to merely SHIELD — *not accumulate* — a stream of powdered fertilizer being projected and *blown* by *vertically* rotating DRUM-TYPE paddle wheel impellers.

The Stoltzfus reference discloses a semi-conventional spreader having *horizontally* rotating disc-type impellers having curtains to merely SHIELD — *not accumulate* — the NORMAL distribution pattern from wind currents.

To replace the DISTRIBUTOR MECHANISM of Johnson with the DISTRIBUTOR MECHANISM of Stoltzfus would result in Stoltzfus's horizontal impellers AND Stoltzfus's curtain to SHIELD, *not accumulate,* the material being discharged from Johnson's hopper.

Appellant recognized and then solved a problem using means which, though simple when viewed after the event, produced a new, dynamic, useful and unobvious result.

The District Court's finding that there was no invention in the claims in suit is clearly erroneous being neither consistent with nor supported by the evidence.

ARGUMENT

Appellant discovered that by completely enclosing the discharge port and the impellers of a conventional rotary disc-type spreader for free-flowing solid materials within an elongated, unobstructed, open-bottomed chamber, he was able to effectively and efficiently spread *pulverulent ma-*

terial — thereby providing a new, useful and unobvious result.

It is significant that the Anthony Company, a former leading manufacturer of rotary disc-type spreaders for solid free-flowing materials such as aglime, sand, limestone, etc., had been struggling with, but were unable to solve the problem of spreading pulverulent material with conventional rotary disc-type spreaders, even though they were fully aware of the teachings of the Johnson (British), Stoltzfus and Hoffstetter patents, upon which the Patent Office and District Court relied for negating invention in applicant's attachment.

The uncontradicted testimony of the President of the Anthony Company makes it clear that what Appellant did with his attachment *was not taught by the prior art and that Appellant Jones's teachings produced new and unobvious results.*

The President of the Anthony Company testified as follows, App. 12:

> "The Anthony Company entered into an agreement with Jones to pay him a PRE-PATENT royalty *after a view of his device,* and it was under that pre-patent royalty that we built and sold the Jones spreader."

When Appellant filed his patent application he frankly stated on page 11 of his patent application, App. 115, that he was unaware of the reason why his attachment gave the results it did when associated with a conventional rotary disc-type spreader for solid free-flowing materials, however a complete explanation of the operating principle of Appellant's attachment was given by Mr. Duis during his deposition, App. 11, who explained that Appellant's attachment, when associated with the discharge port and impellers of a conventional rotary disc-type spreader, forms an *elongated, unobstructed, open-bottomed chamber* within which the conventional disc-type impellers develop *"a SELF-CONTAINED air current without the induction of outside air into the unit"*, and

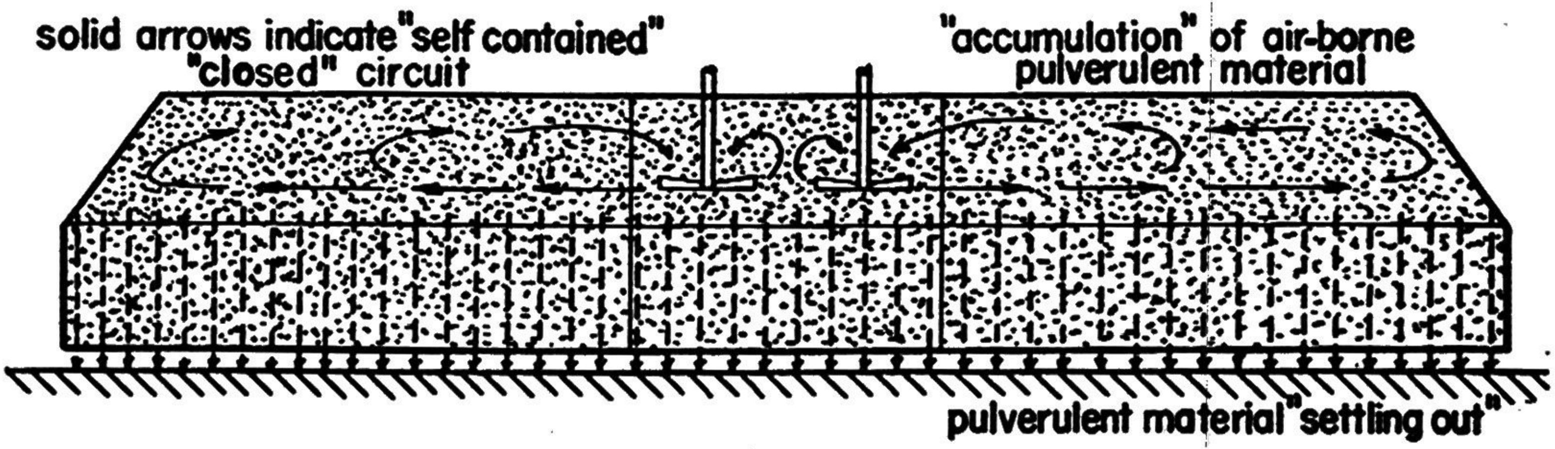
That the self-contained air circuit "carries the material in a circuit shown by the arrows 201" in the *lower* of the three sketches that he drew, Exhibit C, App. 48, and that:

> "The *self-contained* nature of this air circuit causes the chamber to become *so saturated* with the material to be spread that it *settles out* of the circuit and settles to the ground," App. 11.

Mr. Duis further pointed out that a basic difference between a device provided with Appellant's attachment and the Johnson (British) device was that "there is no induced air in the direction of arrow 202" in Appellant's device which blows or carries the particles to the ground, whereas in the Johnson device two streams of high velocity, *outside* air are utilized for carrying the fertilizer particles *along a trajectory* between the drum type paddle wheel impellers and the ground, viz., App. 11:

> "The British device uses the induction of OUTSIDE AIR into the hood as a carrying means to convey the fine material from the distributor to the ground. It *BLOWS the material over its pattern.*" (Emphasis added)

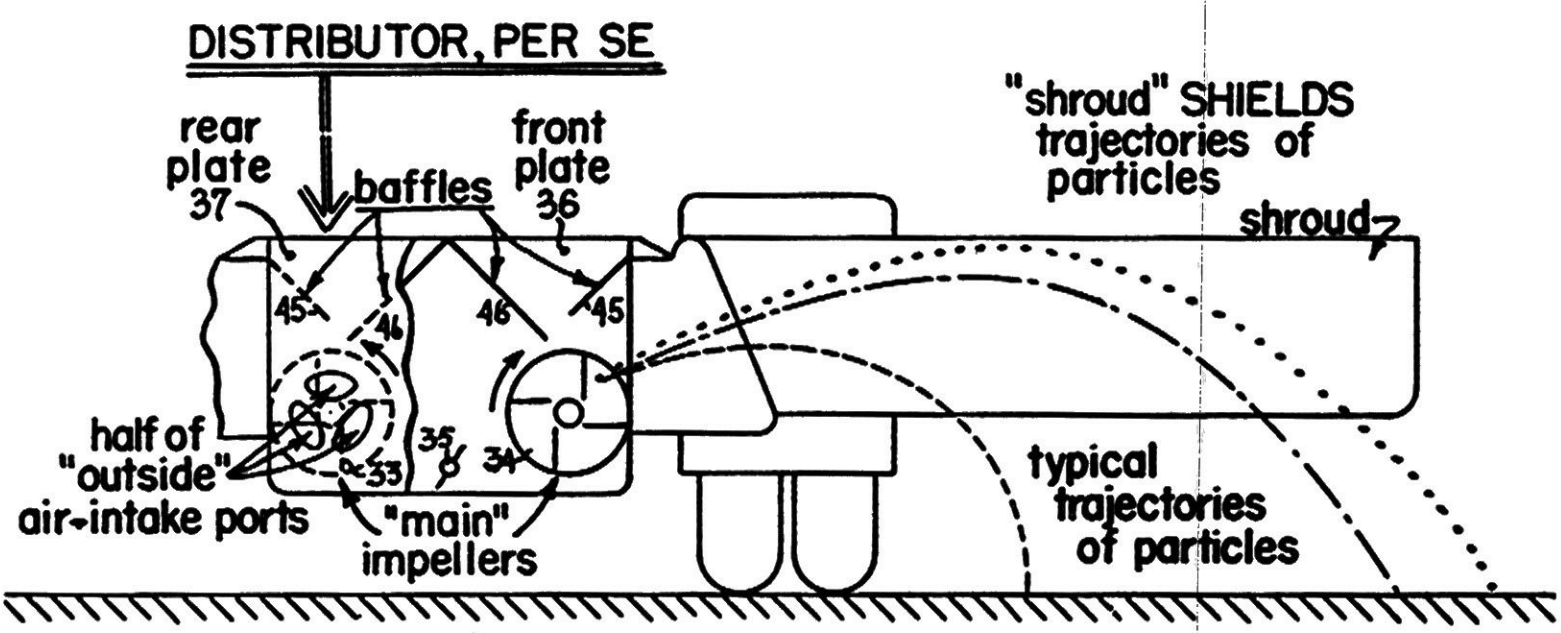
Appellant submits herewith as Plate VI, a diagramatic sketch of Appellant's device based upon Duis Exhibit C, wherein the "closed circuit" set up by the rotary disc-type impellers in the upper portion of the elongated, unobstructed, open-bottomed chamber is denoted by the solid arrows. Plate VI also illustrates the SATURATED condition of airborne pulverulent material within the housing, and the manner in which the *"accumulated"* pulverulent particles *settle out* of the saturated circuit onto the ground.


solid arrows indicate "self contained" "closed" circuit
"accumulation" of air-borne pulverulent material
pulverulent material "settling out"

APPELLANT'S DEVICE
PLATE VI

Plate VII is a diagramatic sketch based upon Fig. 5 of the Johnson patent illustrating the manner in which the MAIN drum-type paddle wheel impellers and the *essential* high velocity air stream of *outside* air propel particles along individual trajectories from the impellers to the ground, said trajectories being merely SHIELDED by shroud 48.

With further reference to Plate VII and Figs. 3 and 4 of the Johnson patent, App. 236, it will be noted that the


DISTRIBUTOR, PER SE
rear plate 37
baffles
front plate 36
"shroud" SHIELDS trajectories of particles
shroud 7
45
46
46
45
half of "outside" air-intake ports
35
33
34
"main" impellers
typical trajectories of particles

JOHNSON'S DEVICE (British)
PLATE VII

central unit which comprises the DISTRIBUTOR, PER SE, contains and is filled with three paddle wheel type impellers, 33, 34 and 35, and with four downwardly depending baffles, 45 and 46, wherein each of the three impellers and each of the four baffles extend entirely across and between the front and rear plates 36 and 37 of the distributor unit. *The inherent details of the central distributor unit of Johnson are such as to positively separate the interior of one of Johnson's shrouds from the other.* Quite obviously this reference does not disclose or suggest an "elongated, unobstructed, open-bottomed chamber" as provided by Appellant's attachment.

The following testimony of the President of the Anthony Company, coupled with the *actual* disclosure of the Stoltzfus reference, conclusively establishes that Stoltzfus did not teach anything which would lead those skilled in the art to find Appellant's attachment from the Stoltzfus disclosure. The President of the Anthony Company testified:

> "During our investigation we studied the Stoltzfus theory and felt as he stated that it was *simply a wind breaking curtain* — it did not establish a definite pattern to be saturated with the theory of the Jones device, and we discarded it as not doing the job we wanted done," App. 13.

The Claim

Claim 1, which has been agreed upon as a typical and broad claim directed to appellant's invention, is reproduced herebelow in a series of "lettered" subdivisions:

A.

An *attachment* for converting a conventional mobile rotary disk-type spreader for free-flowing solid materials into a spreader for pulverulent material such as phosphate, B.

wherein the conventional spreader includes a hopper having a discharge port and substantially horizontally disposed rotatable impeller means carried by a substantially vertically disposed shaft for rendering airborne particles of material discharged through said discharge port,

C.

said attachment comprising a *central portion* dimensioned to *enclose* the discharge port and said impeller means, said central portion including front, top and rear walls,

D.

and a pair of end portions each including front, top, rear and outer end walls, said end portions hingedly secured to said central portion for movement between lowered and raised positions relative thereto,

E.

said end portions when in lowered position combining with said central portions to define an elongated unobstructed open-bottomed chamber within which chamber pulverulent material from said hopper is rendered airborne due to rotation of the said impeller means and will accumulate in sufficient concentration to effect a substantially uniform gravitational depositation through said open bottom without any appreciable blow away of the material and thus effect a uniform application of the material on the ground.

F.

means for securing said central portion to the hopper of a pulverulent distributor,

G.

and means for rotating the impeller shaft.

The testimony of Mr. Hardy, App. 84-90, analyzes Claim 1 and indicates the manner in which the references fail to satisfy claim terminology, which may be summarized as follows:

Portion *A* of the claim calls for an ATTACHMENT per se for *CONVERTING* a "conventional" device for spreading FREE FLOWING, SOLID MATERIALS (like sand, limestone, cinders, etc.)

INTO

a device for spreading PULVERULENT material such as phosphate.

Portion *B* of the claim describes the essential elements of the EXISTING, COMPLETE and OPERATIVE "conventional" disk-type spreader with which the ATTACHMENT is to be associated.

Judicial notice should be taken that portion *B* specifically calls for the disc-type impellers as part of the "conventional" unit and NOT as part of the attachment.

Portion *C* of the claim starts the description of the ATTACHMENT which includes a CENTRAL portion including front, top and rear walls which ENCLOSE the EXISTING discharge port and the EXISTING impeller means of the "conventional" unit of portion *B*.

Portion *D* of the claim is directed to the END portions, each of which includes front, top, rear and outer end walls and their hinged relationship with the CENTRAL portion to *C* above.

Portion *E* of the claim specifies how the END portions cooperate when lowered, with the CENTRAL portion *C* whereby to define an

ELONGATED, UNOBSTRUCTED, OPEN-BOTTOMED CHAMBER.

in which pulverulent material from the "conventional" hopper is rendered airborne within the *"elongated, unobstructed, open-bottomed chamber"*, due to rotation of the said "conventional" impeller means comprising part of the conventional spreader, whereby "the *pulverulent* material will *ACCUMULATE* within the elongated, unobstructed, open-bottomed chamber *in sufficient concentration* to effect a substantially uniform gravitational deposition through said open bottom."

Portion *F* of the claim broadly covers any means for attaching plaintiff's ATTACHMENT to the spreader of portion B.

Portion *G* of the claim broadly covers any conventional means for rotating the conventional disc-type impeller and merely completes the description of an operative device provided with plaintiff's ATTACHMENT.

Prior Art Barren of Appellant's Inventive Concept

It is respectfully submitted that the Patent Office and the District Court erred in their understanding and interpretation of what the Johnson (British) and Stoltzfus patents *actually disclose* "to those skilled in the art".

While the Johnson (British) patent is directed to a device for accomplishing the same end result as Appellant, viz., the application of pulverulent material onto the ground — the *means and mode of operation are radically and fundamentally different.*

The finding of the Patent Office and District Court that both Johnson and Stoltzfus disclosed, App. 245,

> "a structure having similar elements to those of the claim in suit",

is not supported by the evidence, and *is clearly erroneous and contrary to fact.*

It is a cardinal and basic rule of patent law that "in considering the questions of invention, it is necessary to determine further whether the art relied upon contains *adequate* directions for the practice of the invention WITHOUT RESORT TO THE INVOLVED APPLICATION", In re GIBBONS, (C. C. P. A.) 210 Fed. 2d 999 at 301.

The record before this Court conclusively establishes that

a. Johnson (British) discloses a pulverulent distributor, per se, which

b. utilizes three *vertically rotating paddle wheel* type impellers, and

c. two high velocity streams of OUTSIDE air, which

d. propel pulverulent particles along *trajectories* to the ground, and

e. shrouds which merely SHIELD the trajectories of the material beyond the lateral confines of the machine.

f. Johnson's shrouds, when lowered, *do not* combine with his central portion to "define an *elongated, unobstructed open-bottomed chamber.*

g. Johnson gives an identical distribution pattern (with pulverulent material) whether his shrouds be raised or lowered.

h. It is IMPOSSIBLE to *"accumulate"* airborne pulverulent material in Johnson's shrouds.

The record also conclusively establishes that:

a. Stoltzzfus discloses a NON-conventional rotary disc-type spreader in which the

b. two *horizontally* rotating impellers have been laterally separated to increase their distribution pattern, and

c. a depending curtain OPEN in its front wall to admit OUTSIDE air, said

d. depending curtain merely SHIELDING the *normal* distribution pattern of the impellers.

e. It is IMPOSSIBLE to "accumulate" airborne pulverulent material within Stoltzfus's curtain.

The finding of the Patent Office and District Court that it was obvious and devoid of invention to substitute the *horizontally* rotating (DISC-TYPE) impellers shown by Stoltzfus for the *vertically* rotating (DRUM-TYPE PADDLE WHEEL) impellers as shown by Johnson is clearly erroneous and contrary to fact, since such substitution would require the *complete reconstruction* of Johnson along principles OPPOSED to his ACTUAL disclosure, and the resultant device, IF operable, would be a complete and radical departure from Johnson's principle, patterned NOT after the teachings of Stoltzfus *NOR* after the combined teachings of Johnson and Stoltzfus — but patterned after APPELLANT'S disclosure.

The following language of this Court in L-O-F GLASS FIBERS CO. v. WATSON, Commr. of Pats., 107 U.S.P.Q. 197 at 202; — F. 2d —, at —; — App. D.C. —, is squarely at point.

> "We would not 'lightly' reverse the able trial judge, but we, too, have read the transcript and have examined the exhibits. While there is evidence upon which, in part, the findings can be supported, on the entire evidence we are left with the definite and firm conviction that a mistake has been committed." (citing Dollar v. Land, 87 U.S. App. D.C. 214, 217, 218, 184 Fed. 2nd 245 (D.C. Cir. 1950), cert. denied, 340 U.S. 884). "On the record made and with the exhibits before us, we are permitted a 'subjective opinion or formulation of a judgment,' which when so predicated, makes clear that the 'combination and improvement admittedly brought about are the product of creative talent' which lifts the Cook claim 1 to the level of patentability over and above the prior art cited."

In the subject case the Patent Office has already allowed claim 7, App. 256, which is similar to the claims here in suit, except for the addition of a depending baffle member in the hinged end members, and as stated by this Court in SHARP v. COE, 75 App. D.C. 118, 122; 125 F. 2d 185:

> " * * * the action of the Commissioner on allowed claims can be taken into consideration in determining the patentability of rejected claims" * * *
> "And we are agreed that what persuasive value should be given to the action of the Commission in respect of allowed claims is a matter which must be determined in each case on its own facts."

The prior art is as barren of the inventive concept of the claims here in suit as it was of the inventive concept of allowed claim 7.

When the prior art is studied

> "to ascertain what may be the real merit of the invention and to decide whether or not it has substantially advanced the art"

as stated in the L-O-F case, supra, we find that "Appellant's device, as embodied in the claims in suit, clearly satisfies the criteria set up by the Supreme Court in A. & P. TEA CO. v. SUPERMARKET CORP., 340 U.S. 147, and by Title 35 U.S.C. Sec. 103, since the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole was *NOT* "obvious" at the time the invention was made in 1948, nor is it "obvious" even today (*without resort to Appellant's application*) to a person having ordinary skill in the art to which said subject matter pertains.

Claims 2, 3, 4, 5, 6 and 16

Although the case was presented to the District Court with the understanding that if it should find Appellant's Claim 1 allowable, Appellant could additionally have Claims 2, 3, 4, 5, 6 and 16, the Court found, contrary to fact, App. 245-246:

> "that the details of the size, shape and proportions of the housing attachment parts, as set forth in plaintiff's application and claims, are matters which in no way define invention, since they are merely difference in design within the skill of ordinary skilled worker in the art to which plaintiff's apparatus relates."

Claim 1 is a broad claim and claims 2, 3, 4, 5, 6 and 16 each add various structural limitations noted in the italicized portions of those claims as reproduced in the Joint Appendix, pages 257 to 265. The references of record are DEVOID of even the suggestion of "end portions" having the various structural limitations and shapes as called for in these claims which define the upper and lower dimensional limits of the structural elements of Appellant's device.

Claims 29, 30, 31

It was clear error for the District Court to reject Claims 29, 30 and 31 as "prolix", App. 246, since claims 30 and 31 are but four or five lines in length, being "dependent" upon claim 29. Claim 29 is quite specific and though long, nevertheless "*particularly* points out and *distinctly* claims" the subject matter which Appellant regards as his invention, as authorized by 35 U.S.C. Sec. 112. Certainly Appellant should be entitled to claims of varying scope or breadth, so long as they are patentably distinguishable from his other claims, and the prior art. Claim 29 so clearly avoids the prior art that any detailed discussion would be redundant.

Applicable Authorities

DEWEY and ALMY CHEMICAL CO. et al v. MIMEX CO., INC., (CCA2) 124 F. (2d) 986,989, is persuasive authority that Appellant's inventive concept has *not* been "anticipated" by the disclosures of the Johnson or Stoltzfus references whether considered singly or in combination:

> "No doctrine of the patent law is better established than that a prior patent or other publication to be an anticipation *must bear within its four corners adequate directions for the practice of the patent invalidated.* If the earlier disclosure offers no more than a starting point for further experiments, if its teachings will sometimes succeed and sometimes fail, *if it does not inform the art without more how to practice the new invention, it has not correspondingly enriched the store of common knowledge, and it is not an anticipation."* (emphasis added)

LOOM CO v. HIGGINS, 105 U.S. 580, 591:

> "It may be laid down as a general rule, though perhaps not an invariable one, that if a new combination and arrangement of known elements produce *a new and beneficial result, never attained before, it is evidence of invention.* It certainly was a new and useful result to make a loom produce 50 yards a day when it never before had produced more than 40." (emphasis added)

Appellant's attachment produces a new, useful and unobvious result — it enables 100% of a pulverulent material to be evenly spread onto the ground "like painting" (Plate IV) *with a conventional rotary disc-type spreader* when before only 5% to 10% reached the ground the other 90%-95% being dissipated as a "billowing cloud."

O'ROURKE ENGINEERING CONST. CO. v. McMULLEN, et al, CCA 2, 160 Fed. 933, 938:

> "The principal question in such case is: *Has the patentee added anything to the sum of human knowledge, has he made the world's work easier,* cheaper and safer, *would the return to the prior art be a retrogression*? When the court has answered this question, or these questions, in the affirmative, the effort should be to give the inventor the just reward of the contribution he has made.
>
> * * *
>
> "The courts have frequently held that *one who takes an old* machine *and* by a few, even inconsequential, changes *compels it to perform a new function and do important work which no one before ever dreamed it capable of performing, is entitled to rank as an inventor."* (emphasis added)

Appellant's evidence to the effect that his attachment successfully solved the problem of effectively distributing pulverulent material has not been challenged. Appellant's attachment was the direct cause for increasing by *ten-fold* per year the use of phosphates in the mid-west!

RAILROAD SUPPLY CO. v. HART STEEL CO. et al, (CCA 7) 222 Fed. 261, at 273-4:

> "*Invention* of a combination does not lie in gathering up the elements that are employed, but *consists in first conceiving that a new and desirable result may be attained by bringing about a relationship of elements which no one has before perceived and then going forth to find the things that may be utilized in the new required relationship.* In an old and well-developed field the apparent simplicity of a new device is often the highest evidence of inventive genius. So far as human minds are able, judges should exclude from view the disclosure of the patentee, should regard the patentee's problem as of a time antedating the application, and should therefore not too readily

> accept the ex post facto wisdom of the bystander. *Prior art structures are to be examined in view of the purposes and laws of such structures.* It is not enough that a prior art device approach very near the idea of the patent in suit; *it must so clearly disclose the idea that it would be apparent to a mechanic of ordinary intelligence who was not examining the device for the purpose of discovering in it the idea of the patent.* For, if he already had that idea, he would not be getting it from the prior art device, but from his own imagination or some other source." (emphasis added)

INDEPENDENT OIL WELL CEMENTING CO. v. HALLIBURTON, et al., (CCA 10), 54 F. 2d 900, at 905:

> "With respect to the result produced, it is not essential that it be a wholly new result, *but it is sufficient if an old result is effected in a more facile, economical or efficient way."*
>
> * * *
>
> "When the elements are so united that by their reciprocal influence upon each other, or by their joint action on a common objective, *they perform additional functions and accomplish* additional results, the union is a true combination. (emphasis added)

Appellant's attachment, when associated with a *conventional* rotary disc-type spreader for solid, free flowing materials, enables it to perform ADDITIONAL functions and accomplish ADDITIONAL results, viz., *successfully spread PULVERULENT materials!*

In in re HARBECK, 39 App. D.C. 559 at 563-4, this court concisely summarized the law as follows:

> "While the use of new materials to produce a known result, or of known materials to produce a new but obvious result, may not always constitute invention, *if the new idea,* when applied, *brings success out of failure, produces a new and useful result and saving in operation or production, or efficiency instead of in-*

> *efficiency, gives the device new functions and useful properties, it is invention,* and may be patented."
>
> * * *
>
> "In other words, *the inventive discovery* made by appellant *consisted in an intelligent apprehension of the elements entering into the device AND the bringing of them together in such a relation as to produce a new and useful article of commerce.* The extent to which he modified or altered existing inventions is unimportant, since *he accomplished a new and beneficial result not so obvious as to suggest itself to those skilled in the art. It remained for appellant to discover the hidden cause that marked the line between failure and success."* (emphasis added)

See also, THORNTON v. COE, Commr. of Patents, 69 App. D.C. 383; 102 Fed. (2d) 247 at 252-3:

> The Thornton device is simple. But as stated in Diamond Rubber Co. v. Consolidated Rubber Tire Co., 220 U. S. 428 (1911):
>
> > Its simplicity should not blind us as to its character. Many things, and the patent law abounds in illustrations, seem obvious after they have been done, and, 'in the light of the accomplished result,' it is often a matter of wonder how they so long 'eluded the search of the discoverer and set at defiance the speculations of inventive genius.' Pearl v. Ocean Mills, 11 Off. Gaz. 2. (220 U.S. at 434-5)
>
> "In the use of the large disc and continuous shaft of Peterson and Marcy's threaded engagement of disc and shaft, Thornton accomplished much more than a mere aggregation of the elements of the prior art. 'It may be laid down as a general rule, though perhaps not an invariable one, that if a new combination and arrangement of known elements produce a new and beneficial result, never attained before, it is evidence of invention.' Loom Co. v. Higgins, 105 U.S. 580, 591 (1881).
>
> * * *

> "It appears that the problem of spreading of the heads of warper beams confronted the textile industry for at least eight years after the issuance of the patent to Peterson, before Thornton solved it with the adjustable disk; and it appears that Thornton's improvement was a distinct success. This is highly persuasive of invention. '*Where the* method or *device satisfies an old and recognized want, invention is to be inferred, rather than the exercise of mechanical skill.* For mere skill of the art would normally have been called into action by the generally known want. See Loom Co. v. Higgins, 105 U.S. 580, 591; Krementz v. Cottle Co., 148 U.S. 556, 560; Hobbs v. Beach, 180 U.S. 383, 392; Carnegie Steel Co. v. Cambria Iron Co., 185 U.S. 403, 429, 430; Expanded Metal Co. v. Bradford, 114 U.S. 366, 381.' Paramount Corp. v. Tri-Ergon Corp., 294 U.S. 464, 474 (24 USPQ 303) (1935). We think the Thornton device is clearly patentable within the elementary principles governing combinations and illustrated in Loom Co. v. Higgins and Diamond Rubber Co. v. Consolidated Rubber Tire Co., supra. See also Wach v. Coe, 64 App. D. C. 235, 77 F. 2d 113 (25 USPQ 25) (1935); In re Eastwood, 33 App. D. C. 291 (1909)." (emphasis added)

Since conventional rotary disc-type spreaders were in widespread use since 1930, *and since it was not until Appellant's attachment in 1948* that they were usable for *satisfactorily* distributing pulverulent material, the case of HOBBS v. BEACH, 180 U.S. 383, 392, is dispositive of the issue:

> "It appears from the testimony that several of these addressing machines, of which that of Dennis and York is a type, and which are now claimed to have inspired the Beach patent, *had been upon the market for many years and yet it never seemed to have occurred to anyone engaged in the manufacture of paper boxes that they could be made available for the purpose of attaching strips to the corners of such boxes.*

> This very fact is evidence that the man who discovered the possibility of their adoption to this new use was gifted with the prescience of an inventor." (emphasis added)

There can be no question but that plaintiff's discovery represents a substantial and significant contribution to the art of applying pulverulent material directly to the ground, nor can there be any doubt but that pulverulent material, when spread with a conventional limestone spreader that has *not* been provided with plaintiff's attachment, will result in the pulverulent material being hurled into the air in all directions so that but 5% to 10% of the material reaches the ground in the vicinity of the device, the other 90% to 95% of the material being distributed as a billowing cloud which will ultimately be deposited in the tops of trees and other places remote from the unit where it will do no good.

Finally, it will be noted that the "principal" reference relied upon is the British (Johnson) patent which is *opposed to Appellant's teachings in structure and function.* The language used by this court in re ELK, 57 App. D.C. 203; 19 Fed. 2d 677 at 678 is clear authority for rejecting Johnson as a proper reference against Appellant's claims, here in suit:

> "We think, therefore, that this foreign patent should not be used as an anticipation of the invention in issue, in view of the well-established rule announced in CARSON v. AMERICAN SMELTING & REFINING CO. (CCA), 4 F. 2d 463, 465, as follows:
>
> > 'A foreign patent is to be measured as anticipatory, not by what might have been made out of it, *but by what is clearly and definitely expressed in it.* An American patent is not anticipated by a prior foreign patent, unless the latter exhibits the invention in such full, clear, and exact terms as to

> enable any person skilled in the art to practice it without the necessity of making experiments.' "
>
> (emphasis added)

and to the same effect see also BECKETT v. COE, 69 App. D.C. 51; 98 F. 2d 332, 335.

CONCLUSION

It is respectfully submitted that the findings and conclusions of the District Court and the patent Office were clearly erroneous on the question of anticipation wherefore this court is warranted to reverse the District Court and authorize the Commissioner of Patents to issue a patent in the application in suit on the claims in issue.

Respectfully,

J. WARREN KINNEY, JR.,
506 First National Bank Bldg.
Cincinnati 2, Ohio,
Attorney for Appellant.

JAMES W. DENT,
500 American Building,
Washington 4, D.C.
Of Counsel.

Service of copy acknowledged February —, 1956.

....
Attorney for Appellee.

BRIEF FOR APPELLEE AND APPENDIX

United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

States Court of Appeals
For the
District of Columbia Circuit

FILED [illegible]

Joseph W. Stewart
CLERK

APPEAL NO. 13,050

AUBREY L. JONES, APPELLANT

v.

ROBERT C. WATSON, Commissioner of Patents, APPELLEE

APPEAL FROM THE JUDGMENT OF THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA

CLARENCE W. MOORE,
Solicitor, United States Patent Office,
Attorney for Appellee.

APPEAL NO. 13,050

STATEMENT OF QUESTION PRESENTED

In the opinion of appellee, the question presented for determination on this appeal is:

Was there error in the finding of the District Court, following that of the Patent Office tribunals, that it was obvious and devoid of invention to substitute the horizontally rotating impellers shown by the Stolzfus patent of record for the vertically rotating impellers shown by the Johnson patent of record.

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United States Court of Appeals

FOR THE DISTRICT OF COLUMBIA CIRCUIT

APPEAL NO. 13,050

AUBREY L. JONES, APPELLANT

v.

ROBERT C. WATSON, Commissioner of Patents, APPELLEE

APPEAL FROM THE JUDGMENT OF THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF COLUMBIA

INTRODUCTION

This is an appeal by Aubrey L. Jones, who on May 24, 1949, filed an application for patent, Serial No. 95,114, entitled "Apparatus for Distributing Pulverulent Material," from the judgment of the United States District Court for the District of Columbia dismissing his complaint in an action brought under 35 U. S. C. (1952) 145.

In that action, appellant sought to have the trial court authorize the issuance to him of a patent containing claims 1, 2, 3, 4, 5, 6, 16, 29, 30, and 31 of said application.

The District Court concurred with the Patent Office examiner and the Patent Office Board of Appeals in rejecting all the enumerated claims as unpatentable over the cited prior art and in rejecting claims 29, 30, and 31, additionally, as prolix.

THE APPLICATION IN SUIT

The "attachment" to which appellant states (Brief for Appellant, page 2, *et passim*) his alleged invention relates is a hood, shroud, housing, or "distributor" for connection to existing limestone spreaders mounted on existing trucks (J. A. 109 and 110; J. A. 24 and 25). With such shroud, the limestone spreader is used to distribute such finer and pulverulent material as phosphate.

According to appellant's application (J. A. 109), the attached shroud "is so constructed and arranged as to nonmechanically produce a uniform distribution of airborne pulverulent material throughout its length and breadth." The pulverulent material is "rendered airborne within the distributor by impeller means comprising part of the standard discharge assembly of conventional limestone spreaders." Appellant in his application (J. A. 112, final paragraph; See Examiner's Statement, J. A. 213, final paragraph) explicitly states that his alleged invention "is not directed to nor concerned with the structural details of the * * * impeller." The drawings of appellant's application (J. A. 124 and 126, Figs. 1 and 4) illustrate a single impeller 14, but appellant says (J. A. 113, second paragraph) that instead of the one impeller so illustrated "on some spreader devices two or more impellers may be provided." Impeller 14, appellant notes (J. A. 114, final paragraph), is driven at high rotational speed.

The attachment comprises three portions, a central portion 20 and a pair of end portions 22 (J. A. 113). Central portion 20 is proportioned to enclose impeller 14 and likewise "whatever impeller means are provided on the particular type of spreader mechanism being used." Such central portion includes a rear wall 26, a top wall 28, and a front wall 29. Each end portion includes rear, top, front, and end walls 30, 32, 34, and 36, respectively. All three portions are generally U-shaped in cross-section.

"In the preferred embodiment of the invention," appellant states in his application (J. A. 113), "end portions 22 are hingedly secured to central portion 20 for enabling the end portions to be moved between lowered and raised positions." A depending apron 50, fabricated from canvas or other flexible material, "preferably" (J. A. 115) is secured to the lower periphery of each of the central and end portions. The lower edge 52 of that apron terminates adjacent, but in spaced relationship to the surface of the ground. In lowered position, the end portions 22 and central portion 20 combine (J. A. 114) to define an elongated open bottomed chamber.

"The presence of the side, top, and rear walls of the central and end portions," appellant asserts in his application (J. A. 114) "will confine the scatter-distance or dispersion area of the pulverulent material whereby the density of the airborne pulverulent material will increase within the chamber to such an extent that it will, in effect, become saturated and be evenly and continuously dispersed thru the open bottom onto the surface of the ground."

In Fig. 8 of his application (J. A. 126), appellant discloses a hinge 80 intermediate end portion 22. Such alternate form of construction (J. A. 111) allows for a compact folding of the end portions (J. A. 117).

THE PATENTS OF THE PRIOR ART

Three patents were relied upon in the Patent Office, but only the British patent to Johnson, No. 584,809, dated January 23, 1947 (J. A. 230), and the United States patent to Stoltzfus, No. 2,281,212, granted April 28, 1942 (J. A. 237), require consideration by this Court. The third patent, the United States patent to Hoffstetter, No. 2,500,681, granted March 14, 1950 (J. A. 238), was relied upon by the two Patent Office tribunals (J. A. 217, final sentence; J. A. 225 and 226) as showing particular details particularly recited in such particular claims as claims 4 and 16. Before the trial court, however, appellant and appellee agreed (J. A. 243, final sentence) that the right of appellant to a patent containing claims 1, 2, 3, 4, 5, 6, and 16 might be resolved by consideraiton of claim 1 alone, and the "case was briefed on both sides solely with respect to the question of whether or not claim 1 is allowable." (J. A. 242, Finding of Fact No. 2; J. A. 239, second and third paragraphs). Need hence was lacking and now is lacking for consideration of the Hoffstetter patent (J. A. 243, penultimate sentence; J. A. 239, fifth paragraph).

The British patent, like appellant's application, discloses (J.A. 230, lines 10 to 16) apparatus for distributing such dry powdered fertilizers as superphosphate and agricultural lime. Such apparatus aims to "spread fertiliser over a large area in a substantially uniform manner." In lieu of appellant's central portion 20, the British patent provides (J.A. 232, lines 17 to 33) a "distributor unit." That unit comprises two main rotary impact members 33, 34, and a third supplementary rotary impact member 35. These three impact members are accommodated between a pair of spaced end plates 36, 37, which with bridging and connecting bolts 38 form a framework for the unit. Above the plates in the showing of Fig. 1 (J.A. 235) is what the examiner (J.A. 216; *Cf.* J.A. 103 and 104) denominated "a sloping roof-like structure," whereby with the plates 36 and 37 the rotary impact members 33, 34, and 35 are enclosed. The impact members are "rapidly revoluble about their respective axes, which are disposed parallel to the path of travel of the machine." (J.A. 232, lines 34 to 37).

Each impact member 33, 34 is provided with an "elongated inverted U-shaped shroud 48 extending laterally of the machine along and in close proximity to the path of the stream of powder from the impact member." (J.A. 232, lines 96 to 109). The shroud is "effective to shield the stream beyond the lateral confines of the machine and ensure that as the machine moves along, the powder is spread in a substantially uniform manner over a maximum area of the ground disposed laterally of the path of the machine." Further with respect to the distribution of the fertilizer, the British patentee says (J.A. 232, lines 79 to 96):

> "The impact members 33, 34 respectively rotate in the directions of the arrows appearing in Figure 3, with the result that the fertiliser falling into the path of the rapidly moving blades 42, becomes projected as a stream solely in a direction transverse to the path of the machine, as is clearly shown in Figure 5, the stream proceeding from the distributor unit and continuing well beyond the lateral confines of the machine, while all along the stream the fertiliser either falls to the ground, gravitating out of the stream, or is projected thereonto, partly and usually mainly, by direct projection from the blades of the impact member and partly by deflection from the underside of an elongated inverted U-shaped shroud 48 * * *."

To permit his machine to pass through gates and into farm buildings, the British patentee, (J. A. 233, lines 91 to 104) pivotally connects the shroud 48 to trunnion brackets 69 projecting laterally from the upper corners of the end plates 36, 37 of the distributor unit. The operative position and the inoperative position of the shroud both are shown in Fig. 2 of the British patent (J. A. 235).

Finally, Johnson in his British patent teaches (J. A. 234, lines 4 to 8) that the "two impact members 33, 34 generate a current of air by their rotation which becomes projected along with the stream of fertiliser along the corresponding shroud 48."

In Fig. 7 of his British patent (J. A. 236), Johnson illustrates a modification of the machine so fully described and shown in foregoing sections thereof. According to the modification illustrated in Fig. 7, Johnson indicates (J. A. 234, lines 8 to 15), a part of the air to form the current of air that becomes projected along with the stream of fertilizer along each shroud 48 "is drawn into the impact member axially thereof by way of inlet openings 72 in the end plate 36 of the distributor unit and co-registering inlet openings 73 in the end disc 40 of the impact member." Johnson adds (J. A. 234, lines 15 to 21) that, in this way, "the impact member is enabled to act as a centrifugal fan, drawing in air along an axial path and delivering it along a tangential path, the current of air thus projected along the shroud carrying with it at least the finer particles of the stream of fertiliser."

So that "wind or air currents will not unduly affect the uniform distribution" of such material as lime, Stoltzfus, in his United States Patent, No. 2,281,212 (J.A. 237), provides a canopy substantially surrounding the rotatable distributing discs 12 of a "material spreader especially adapted for agricultural purposes" and which "may be readily mounted on a conventional type of motor vehicle" (Specification, page 1, first column, lines 1 to 13; second column, lines 14 to 25). The canopy comprises curtains 21 depending from a frame 20, which frame "also carries a top wall 22 of fibrous material * * * coacting with the curtains 21 in completing the enclosure in which the discs operate." As suspended from the frame 20 and terminating a limited distance from the ground, the curtains 21 "restrict spreading of the material beyond a given distance" from the vehicle body (*ibid.*, page 2, second column, lines 11 to 14, sole claim).

With the discs pictured and described (J.A. 237, Drawings, Figs. 1 to 4; Specification, page 1, first column, line 51 to second column, line 13), Stolzfus' patented spreader is a rotary disc type spreader, such as shown by appellant in the drawings of his application (J.A. 124 to 126) and in the circular of the Anthony Company, Plaintiff's Exhibit A (J.A. 47). Stoltzfus' rotary discs, mounted on vertically arranged shafts 13, "through centrifugal action will spread the material uniformly over a selected area of ground during the forward progress of the vehicle" (J.A. 237, Specification, page 2, first column, lines 3 to 10). Through manipulation of transmissions 31 and 33, the Stoltzfus rotary discs "can be driven at variable speeds."

SUMMARY OF ARGUMENT

1. Representative claim 1 in issue is unpatentable as not defining invention over the combination in which the horizontally rotating impellers as shown by the Stoltzfus patent are substituted for the vertically

rotating impellers as shown by the Johnson patent. Substantiation of such a holding is found in appellant's own application. All appellant did was to add a housing to an existing limestone spreader mounted on an existing truck. The Stoltzfus and Johnson patents disclose housings, and those housings perform similarly to appellant's. Evidence offered by appellant does not establish the contrary.

2. Claims 29, 30, and 31, on appeal, are objectionally prolix.

ARGUMENT

1. As already indicated, a patent containing the claims on appeal was refused to appellant on two grounds by the three tribunals below. With respect to claim 1, claims 2, 3, 4, 5, 6, and 16, and claims 29, 30, and 31, holdings of unpatentability over the cited prior art were made (J.A. 220 and 221; 225 to 228; 240; 245 and 246). Claims 29, 30, and 31 additionally were rejected "because of prolixity" (J.A. 221; 246).

Claim 1, upon which decision in the court below was rested, was found (J.A. 246, Finding of Fact No. 15) not to "define invention over the combination in which the horizontally rotating impellers as shown by Stoltzfus are substituted for the vertically rotating impellers as shown by Johnson."

In the two shrouds 48, the British patent to Johnson (J.A. 235) plainly has the "pair of end portions each including front, top, rear and outer end walls," specified in claim 1, and those end portions obviously are, pursuant to the further requirement of claim 1, "hingedly secured * * * for movement between lowered and raised positions." The full equivalent of the central portion to which said end portions are hingedly secured is present in Johnson's "distributor unit." Appellant's witness, Hardy, agreed (J.A. 98), that that distributor unit has front and rear walls 36 and 37. While the same witness (J.A. 103 and 104) did not agree with the examiner (J.A. 219, final paragraph) that such distributor unit has a sloping cover, it is submitted that that cover is illustrated in Johnson's British patent. As the examiner pointed out (J.A. 219, final paragraph), with reference to the space occupied by impact members 33, 34, and 35, that space is enclosed on front, rear, and top, with open ends of the enclosure freely communicating "with the similar inverted U-shaped shrouds 48."

Of course, the British patent to Johnson does not disclose any "substantially horizontally disposed rotatable impeller means carried by a substantially vertically disposed shaft," as called for by appellant's claim 1. The impact members 33, 34, and 35 of that patent, which is to say, impeller means, are rotatable about horizontally disposed shafts. The type of scattering disc specified in claim 1, however, is of common knowledge, and the District Court properly found (J.A. 241, paragraph numbered 4; J.A. 245, Finding of Fact No. 12) that "it is obvious and devoid of invention to substitute the horizontally rotating impellers as shown by Stoltzfus for the vertically rotating impellers as shown by Johnson and * * * Claim No. 1 does not define invention over the combination". Substantiation of the fact that such a substitution would be within the reach of the ordinary mechanic skilled in the art of agricultural machines is available in appellant's own application. Appellant contemplates (J.A. 112, final paragraph; J.A. 113, second paragraph) employment of diverse impeller means; to repeat, he explicitly states that his alleged invention is not "concerned with the structural details of the * * * impeller" and he notes that "two or more impellers may be provided instead of the one as illustrated in Figs. 1 and 4". What appellant has done is to avow, for his own purposes, that the paddle impeller of the British patent to Johnson and the rotary disc impeller of his applacation and the Stoltzfus patent are equivalents. Under such a decision as that of the Court of Customs and Patent Appeals in *In re McCarn,* 41 C.C.P.A. 905, 212 F. 2d 797, they are to be treated as equivalents in determining patentability. In said decision, that Court, with a lavish citation of precedents, held that an applicant for patent might not argue for patentability with respect to one of the alternatives recited in his application as compared with another alternative therein recited.

What appellant did, and all that appellant did, was to add a housing to an existing limestone spreader mounted on an existing truck (See J.A. 23 and 24). A housing is disclosed in the Stoltzfus patent (J.A. 237). Substantially appellant's specific housing is disclosed by Johnson in his British patent (J.A. 230). A down to earth appraisal of such a housing as appellant's is found in Plaintiff's Exhibit J (J.A. 53 and 54), which, as appellant's witness, Hatala, averred in his deposition (J.A. 45), pictures "an attachment similar to the Aubrey Jones unit." That attachment, it is stated (J. A. 53) in Plaintiff's Exhibit J, "prevents wind and air from getting to the material being thrown by the distributor, confines the usual air-blast created by the whirling distributor and directs it through a tapered fan-shaped 'direction controlling' cover thereby spraying the material outward and downward to the ground." Johnson's housing and Stoltzfus' housing, it is submitted, similarly perform. The point is that the language of appellant's claim 1 with respect to the "end portions when in lowered position combining with said central portion to define an elongated unobstructed open-bottomed chamber" is of no patentable moment. In the expert view of the examiner (J.A. 219, final paragraph), to which the District Court would seem to have assented (J.A. 245, Finding of Fact No. 13; J.A. 241, paragraph numbered 6), the mere shape of the central portion is a matter of choice and mechanical design.

Appellant states in his application (J.A. 114, final sentence) that the "presence of the side, top, and rear walls of the central and end portions will confine the scatter-distance or dispersion area of the pulverulent material." Such walls are present in the Stoltzfus and Johnson housings, and they similarly will confine the scatter-distance or dispersion area of said material (*Cf.* J.A. 94 to 97). From confining the scatter-distance flows increase of density; the language of appellant's application (J.A. 114, final sentence) is: "whereby the density of the airborne pulverulent material will increase within the chamber to such an extent that it will, in effect, become saturated and be evenly and continuously dispersed thru the open bottom onto the surface of the ground." In other words, the language of claim 1 that "within" the "chamber pulverulent material from said hopper is rendered airborne due to rotation of the said impeller means and will accumulate in sufficient concentration to effect a substantially uniform gravitational depositation through said open bottom without any appreciable blow away of the material and thus effect a uniform application of the material on the ground" fails to distinguish appellant's device from the prior art. In his British patent, Johnson states (J.A. 232, lines 90 and 91) that the fertilizer, in part, "falls to the ground gravitating out of the stream."

Testimony by appellant's witness, Fred Hardy, to the contrary is at fault in failing to ascribe to the impact members 33 and 34 of the Johnson patent and the twin rotary discs 12 of the Stoltzfus patent the action of fans (See J.A. 94 to 97, and 100 to 102). Johnson specifies (J.A. 234, lines 4 and 5) that his "impact members 33, 34 generate a current of air by their rotation;" they are "rapidly revoluble" (J.A. 232, line 34). As in the device of Plaintiff's Exhibit J (J.A. 53), Stoltzfus' discs 12 are "whirling" creating the usual "air-blast." In the demonstrations conducted by Hardy at the trial, the impeller means of the models, Plaintiff's Exhibits Nos. 5 and 6 and Plaintiff's Exhibit No. 7, were operated at low speeds (J.A. 79) and the impeller means, in consequence, did not act as fans. Such models, moreover, are of dubious value for the purpose for which they were offered. Models ordinarily are not acceptable for showing that an invention has actually been reduced to practice, which is to say, embodied in practical form and successfully operated. In *Hunter* v. *Stikeman,* 13 App. D. C. 214, this Court said:

> "* * * it has been held that complete invention must amount to demonstration. It must be shown to have passed the region of experiment—of pos-

> sible or probable failure—and that it has arrived at certainty by being embodied in the form intended capable of producing the desired results. A model alone, no matter how complete in detail of construction, does not come within the operation of such a rule. (*Stephenson* v. *Goddell,* C. D., 1876, 133; 9 O.G., 1195.)"

The device of the Johnson patent was criticized by appellant's witnesses, Hardy and Duis, as depending upon centrifugal fans creating a high velocity stream of air to distribute the fertilizer (See Appellant's Brief, page 5; J.A. 77 and 107, and 8 to 11). Johnson does state (J.A. 234, lines 8 to 21), with reference to impact members 33 and 34, that air may be "drawn into the impact member axially thereof by way of inlet openings 72 in the end plate 36 of the distributor unit and co-registering inlet openings 73 in the end disc 40 of the impact member" to the end that "the impact member is enabled to act as a centrifugal fan, drawing in air along an axial path and delivering it along a tangential path, the current of air thus projected along the shroud carrying with it at least the finer particles of the stream of fertiliser." Such statements, however, are concerned with that modification of Johnson's device illustrated in Fig. 7 of his patent (J.A. 236). Duis indicated (J.A. 27) that in his reference to the "induction of air" in his discussion of the Johnson patent he was referring to Fig. 7 thereof. On its face, Hardy's similar criticism of the Johnson patent would appear to have reference to the same figure (See J.A. 72 and 75). Appellee has depended upon the main showing of the Johnson patent, and has found no need to depend upon the showing of the modification of Fig. 7.

References in this brief for appellee to further wording of claim 1 would seem needless. This brief, naturally, is to be read in connection with the findings and conclusions of the District Court and also with the decisions of the examiner and the Board of Appeals. Those tribunals of the Patent Office particularly have discussed in detail contentions advanced before them by appellant and once more repeated. Appellant, it is submitted, has not established that the device defined by claim 1, and accordingly the device defined by claims 2, 3, 4, 5, 6, 16, 29, 30, and 31, represents a patentable advance over the prior art.

The question of invention is a question of fact. *Minnesota Mining & Mfg. Co.* v. *Coe,* 73 App. D. C. 146, 118 F. 2d 593, cert. denied 314 U. S. 624, rehearing denied, 315 U. S. 826. Like any other issue of fact, its determination requires a balancing of credibility, persuasiveness and weight of evidence. Findings made in particular cases on the peculiar facts thereof by various Federal courts can not be of controlling importance. Standards of invention were laid down by the Supreme Court in *The Great A. & P. Tea Co.* v. *Supermarket Equipment Corp.,* 340 U. S. 147. In that decision, the Supreme Court said:

> "* * *. What indicia of invention should the courts seek in a case where nothing tangible is new and invention, if it exists at all, is only in bringing old elements together?"
>
> * * * * *
>
> "* * *. The conjunction or concert of known elements must contribute something; only when the whole in some way exceeds the sum of its parts is the accumulation of old devices patentable.

> Elements may, of course, especially in chemistry or electronics, take on some new quality or function from being brought into concert, but this is not a usual result of uniting elements old in mechanics. This case is wanting in any unusual or surprising consequences from the unification of the elements here concerned, and there is nothing to indicate that the lower courts scrutinized the claims in the light of this rather severe test."
>
> * * * * *
>
> "Courts should scrutinize combination patent claims with a care proportioned to the difficulty and improbability of finding invention in an assembly of old elements. The function of a patent is to add to the sum of useful knowledge. Patents cannot be sustained when, on the contrary, their effect is to subtract from former resources freely available to skilled artisans. A patent for a combination which only unites old elements with no change in their respective functions, such as is presented here, obviously withdraws what already is known into the field of its monopoly and diminishes the resources available to skillful men. This patentee has added nothing to the total stock of knowledge, but has merely brought together segments of prior art and claims them in congregation as a monopoly."

2. The rejection on prolixity of appellant's claims 29, 30, and 31 requires little discussion. Under 35 U.S.C. (1952) 112, the specification of an application for patent "shall conclude with one or more claims particularly pointing out and distinctly claiming the sub-

ject matter which the applicant regards as his invention." By their very length and recourse to minute details, appellant's claims 29, 30, and 31 do not comply with the statute. *Ex parte Lawrence,* 1869 C.D. 83; *Ex parte Iagan,* 1911 C.D. 10. See *In re Ludwick,* 55 App. D. C. 292, 4 F. 2d 959.

COMMENTS ON THE BRIEF FOR APPELLANT

The Brief for Appellant requires a few comments. Reference is repeatedly made therein (Page 2, third paragraph; page 3, first paragraph; page 8, second paragraph) to an affidavit of Ray F. Hatala (J.A. 208), submitted in the Patent Office. Yet in "Plaintiff's Brief after Trial," filed with the District Court, appellant specifically stated with respect to that court:

> "The Court has indicated that the Hatala affidavit before the Patent Office tribunals is not admissible evidence concerning use of Anthony's limestone spreaders on the dates mentioned in the affidavit."

The District Court had indicated that such affidavit was inadmissible (Appellee' Appendix, 20).

Again, appellant asserts (Brief for Appellant, page 3, first paragraph; page 26, final paragraph ; page 27, second paragraph; page 31, first paragraph) that when pulverulent material is spread with a conventional rotary disc-type spreader only 5% to 10% reaches the ground while the remaining 90% to 95% is dissipated as a billowing cloud, and that appellant's "attachment was the direct cause for increasing by *ten-fold* per year the use of phosphates in the mid-west!," (emphasis and punctuation, appellant's), but he does not cite the particular portions of the record on appeal where support for such specific statements is to be found.

CONCLUSION

It is respectfully submitted that the District Court, in following the tribunals of the Patent Office, correctly found that claim 1, and, with it, claims 2, 3, 4, 5, 6, 16, 29, 30, and 31, in suit, do not define invention over the combination in which the horizontally rotating impellers as shown by the Stoltzfus patent are substituted for the vertically rotating impellers as shown by the Johnson patent.

Respectfully submitted,

CLARENCE W. MOORE,
Solicitor, United States Patent Office,
Attorney for Appellee.

FEBRUARY 1956.

APPELLEE'S APPENDIX

FURTHER EXCERPT FROM TRANSCRIPT OF RECORD DURING TRIAL HAD MARCH 21, AND 22, 1955

(Pages 105 and 108)

Mr. KINNEY: The test to be applied in these matters is what do the patents themselves show? Hindsight, quite often makes it appear that what has been devised was so simple as not to involve invention. And it is suggested that the Patent Office tribunals here have used hindsight in selecting certain parts from the priority patents which they then would endeavor to assemble to provide a device that would meet the terminology of the claims.

One of the affidavits of record states that limestone spreaders have been in widespread use. There are hundreds of thousands in use for the past 18 to 25 years. That was at least ten years prior to the Stoltzfus.

It is quite significant that although these limestone spreaders were available, and as the testimony has indicated, were used to spread limestone on to the soil, and that although these pulverulent ground foods such as phosphates and the like were available, that it was not until Jones, the plaintiff herein, came along with his simple attachment, which when put on to a conventional limestone spreader for coarse material, gave a completely new and different type of spreader, namely, a spreader for pulverulent material which was equally effective when spreading pulverulent material as the same device was without the attachment, or when the attachment was moved to an inoperative position, as the device was efficient for spreading the limestone that it was designed to spread.

Thus the British reference to Johnson is for the sole purpose of spreading pulverulent material so that an American manufacturer, or one who is presented with this problem, would see in the Stoltzfus patent a device that is already operative for spreading in a rather Rube Goldberg manner, the same material that the subject matter of this invention enabled a conventional limestone spreader to put down.

It is submitted that the Jones attachment cooperates with the old device, thereby producing a new and unobvious and unexpected result. And by reason of that, it is our position that the claims before your Honor are clearly allowable. They embody patentable subject matter over the teachings of the references of record.

Mr. Moore: I might say, your Honor, that if Mr. Kinney refers to affidavits, I am going to object to that reference because if he wanted to have those matters before the Court the testimony should have been regularly taken subject to cross examination.

Mr. Kinney: The affidavit to which I refer is in the file wrapper of the U. S. Patent Office. It is part of Plaintiff's Exhibit 10, which is a certified file wrapper.

This has been before the Patent Office, and they have never raised objection to it. In fact, in their decision, they say that—in the decision of the Patent Office tribunals, they have this to say:

> "We have carefully considered the affidavit filed in this application by Ray F. Hatala, but find nothing therein which convinces us that the primary examiner was in error in rejecting the claim as unpatentable over the prior art."

That, your Honor is the affidavit to which I refer. It has been referred to by Patent Office tribunal.

Mr. Moore: I agree it is in the record, and agree the record referred to it, but my position is, it is not testimony before this Court because it wasn't taken by deposition, it is a mere affidavit.

Judge Pine made such a ruling in a case which I can cite, your Honor, I believe some ten years back.

The Court: Well, I understand your position. You will file briefs. Frankly, I am inclined to agree that the affidavit may not be considered by the Court, as not being a matter of evidence here.

Mr. Kinney: The reason I thought it should have probative value, the position of the Patent Office is that they are relying on the Examiner's statement and the decision of the Board of Appeals. It is part of this certified record as any other parts of material we have before your Honor, such as the references, because the references are referred to therein.

The Court: I do not think they are the same as the references.

Mr. Kinney: We have been assuming throughout, but we figured the affidavit was before the Court.

The Court: I will take the case under advisement. You will file your briefs, and in due time I will announce the Court's decision.

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